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ABSTRACT

The procedures, assumptions, and recommendations of a statewide plan for the elimination of architectural barriers in all Colorado institutions of higher education are detailed. The first sections of the report concern the number and nature of those having physical disabilities, available statistical data on a national and a state level, and arguments for the removal of architectural barriers. Text and illustrations show the accepted national standard relating to barrier-free design of buildings. The major section of the work contains the results of building-by-building surveys to identify architectural barriers on each of the campuses in Colorado. Recommendations for each campus consist of building survey results, recommendations, and estimated costs of barrier removal. Also included in the recommendations for each campus is a summary sheet of campus-wide priorities. The appendixes contain correspondence and forms related to development of the statewide plan, and the Colorado Architectural Barriers Statute. (Author/MLF)

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STATE PLAN
FOR REMOVAL OF ARCHITECTURAL BARRIERS TO THE HANDICAPPED IN COLORADO HIGHER EDUCATION

Prepared by The Colorado Commission on Higher Education
Committee on Architectural Barriers
Jerome F. Wartgow, Chairman

September 1974

EA 007 837

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I. INTRODUCTION AND SUMMARY

Introduction

During the Spring and Summer of 1974, the Commission on Higher Education (CCHE) took the leadership in development of this statewide plan for elimination of architectural barriers to public post-secondary education in Colorado. The procedures, assumptions and rationale for the final recommendations are to be found in detail in the pages which follow. If implemented, this plan will assure that no student will be deprived of taking advantage of higher education in Colorado as a result of architectural barriers.

Several basic considerations guided the Task Force in development of this plan, and were the basis upon which the final priorities were established. While the sections of this document titled "Needs Justification" and "Technical Considerations" explain these considerations in some detail, they are summarized briefly below.

(1) The legislature has taken a firm position with respect to removal of architectural barriers in all new construction, as expressed in Senate Bill #47 (1963). The Task Force supports this legislative intent, which implies that approval of all new facilities, or major renovations to existing facilities, will require assurance that architectural barriers to the handicapped are eliminated.

(2) In the case of existing facilities, the CCHE interpretation of "accessibility to higher education" does not mean that all facilities on all campuses must be totally accessible. Rather, it means that, at the minimum, at least one of each unique degree program or course of study offered in Colorado will be accessible somewhere within the State (with a few exceptions as noted in the text of the plan).

In instances where a program is offered on only one campus in the State (i.e. Gunsmithing at Trinidad State Junior College), the plan recommends that architectural barriers that prevent students from enrolling in that program be removed.

(3) In accord with consideration (2) above, the large number of unique programs offered at several of the comprehensive universities and colleges mandate that they be totally barrier free. Therefore, the plan recommends that existing facilities at the University of Colorado - Boulder, University of Colorado - Medical Center, Colorado State University, University of Northern Colorado, and Southern Colorado State College (Belmont) be renovated so as to be accessible.

(4) In arriving at building priorities within a campus, the Task Force relied heavily upon institutional recommendations and data on utilization of the building, future plans for the building, the nature of programs housed in the building, and the extent to which the building was used by members of the community.

(5) A basic philosophy was followed in arriving at recommendations for

making a specific building accessible. That is, wherever possible, renovation would result in compliance with the most ideal situation for the handicapped student as defined in subsequent sections of this report. However, in as many instances as not, the Task Force brought judgement to bear and issued a compromise recommendation that would make the facility "minimally" as opposed to "ideally" accessible. The experience of the Task Force members and institutional officers, architectural integrity of the campus and buildings, and cost/benefit considerations were the basis for these judgements.

(6) While this State Plan deals with physical accessibility to a building or campus, it does not offer recommendations on problems of accessibility to academic programs once a student is in the facility. For example, while this plan insures that a student in a wheelchair can get into a chemistry laboratory, it does not make provisions for the student to take full advantage of the program once he is there. It is recognized that the latter considerations are as important as the former, and this whole area merits further study.

(7) Although numbers of handicapped students currently enrolled on the campus influenced Task Force recommendations, no formula or arbitrary use figures were applied to determine whether or not facilities should be made accessible. In this context, information was also collected on the number of handicapped students who might attend if the facility were accessible. This consideration accounts for the fact that in a selected few buildings, recommendations for removal of architectural barriers were made, even though no handicapped students were currntly enrolled. In each of these instances, high community use of

an accessible facility was also anticipated.

(8) Finally, it is the firm belief of the Task Force, that every recommendation offered in this plan will improve situations for the able-bodied as well as the handicapped students. No recommendations for improving accessibility for the handicapped have been made at the expense of convenience or safety of the able-bodied student.

With these considerations in mind, the recommendations and budgetary implications of removing architectural barriers to the handicapped are listed below in priority order. Back-up information including specific cost estimates, building by building, are included in subsequent sections of this plan.

Summary of Recommendations

The Task Force recommendations are listed in two general categories of priority, with the listing of institutions within each of these categories also reflecting a priority order. While the details supporting each of these recommendations will permit reviewing agencies to re-order the priorities, the Task Force strongly recommends that priorities within an institution not be changed. For the same reasons, it is important that an institution receive funding in the amount requested, and that if budgeting parameters so dictate, that projects on fewer campuses be funded, as opposed to reducing the recommended amounts for any particular institution. The recommendations were prepared as a package which considered entire campuses or programs, and elimination of only a portion of the barriers quite probably would result in no net increase in campus accessibility. It should be noted that these recommendations apply only to renovation of existing facilities.

It is assumed that all new facilities will be accessible and that costs involved will be included in original construction estimates.

Specifically, the entire new campuses for the following institutions will be accessible to the handicapped: (1) Auraria Complex, including Community College of Denver, Auraria, Metropolitan State College and University of Colorado - Denver, (2) Community College of Denver - North Campus, (3) Arapahoe Community College, and (4) El Paso Community College, Colorado Springs.

If an institution is not included in the list of priorities which follow, the Task Force implied recommendation is that no funds be invested in elimination of architectural barriers at that institution, at this time.

Priority Category I

1.	University of Colorado - Boulder	Phase III (1975)	$250,779
		Phase IV (1976)	$270,841

A major, comprehensive university in the State, offering dozens of unique programs which are the top priority for accessibility. The Task Force supports continued funding of the remaining phases in the University of Colorado - Boulder approved Program Plan for Elimination of Architectural Barriers. Phases I and II were funded in 1973 and 1974 respectively, and it is recommended that this continuing project be funded directly to the University as in the past.

2.	University of Northern Colorado	$832,402

A major university with large numbers of handicapped students enrolled, and with strong programs in areas dealing with the handicapped. A very active Handicapped Students Association with a national reputation provided guidance in the use of a $10,000 1974 appropriation from the legislature to the University to complete program planning for removal of barriers over the entire campus.

3.	Colorado State University	$991,354

Colorado State University received a $20,000 appropriation from the 1974 State Legislature for the purpose of doing preliminary work related to removal of barriers to the handicapped. The number of handicapped students enrolled at this comprehensive university, and the number of unique programs which are attractive to the physically disabled, require removal of barriers throughout the entire campus.

4.	University of Colorado - Medical Center	$ 13,935

Although the large portion of the Medical Center is accessible due to the very nature of the program, several significant barriers to the handicapped still exist in key, high use buildings on the campus. The plan calls for removal of the remaining barriers.

5.	Southern Colorado State College (Belmont Campus)	$ 24,105

As a major institution in Colorado which has traditionally been recognized as being a campus to which handicapped students were encouraged to attend, Southern Colorado State College is basically barrier free. However, several architectural problems do prevent students and staff from having access to all essential facilities, and this plan will remove those remaining barriers.

6.	University of Colorado - Denver	$ 5,440

University of Colorado - Denver is another institution in the State of Colorado which has a history of encouraging handicapped students to attend. While the new Auraria campus will be totally accessible, there are several minor problems to be rectified in existing University of Colorado - Denver buildings which are scheduled for continued use.

7. University of Colorado - Colorado Springs $ 9,750

All new buildings at University of Colorado - Colorado Springs are planned to comply with CCHE guidelines for accessibility. However, several minor modifications to existing facilities (formerly a tuberculosis sanatorium) will insure accessibility to current facilities which are projected for continual use.

8. Community College of Denver - Red Rocks Campus $ 14,610

Community College of Denver - Red Rocks is basically accessible to the handicapped, but several significant barriers remain which need to be eliminated to insure full accessibility to programs and facilities on the campus.

9. Adams State College $ 79,718

The campus at Adams State lends itself well to accessibility for the handicapped. The recommendations in the program plan would be an excellent investment in terms of the number of additional programs and facilities that would become accessible to handicapped students in the South Central portion of the State.

10. Trinidad State Junior College $ 18,770

Trinidad State Junior College offers two programs that are unique in the State of Colorado and at the same time, attractive to handicapped students. These are Gunsmithing and Gun Repair. The recommendations contained herein would eliminate architectural barriers in those facilities which must be accessible to students who wish to complete either of these programs.

11. Mesa College $ 67,365

Of all the Western Slope institutions, Mesa College has the campus that best lends itself to removal of barriers to the handicapped. While several second floors in older buildings will remain inaccessible following implementation of the recommendations in this plan, careful consideration to scheduling of courses should permit handicapped students to complete any course of study offered by the College. In addition, those buildings which are used heavily for purposes of community service (gymnasium, theatre) will be accessible to handicapped persons in the community at large, as well as the student body.

Sub-Total Cost Estimate for Priority Category I $2,579,069

Priority Category II

Those institutions included under Priority Category II include buildings in which accessibility to the handicapped is highly desirable. However, justification for Category II requests is based more heavily on community service and/or convenience, as opposed to providing access to unique programs as was the case for those listed under Priority Category I.

12. Colorado School of Mines $ 80,840

While Colorado School of Mines offers many programs that are unique, the nature and style of the campus and buildings make it architecturally and economically infeasible to provide total accessibility. If the recommendations included in the plan are implemented, those areas of the campus which receive the greatest amount of student and community use will be accessible.

13. Lamar Community College $ 7,165

The relatively small investment recommended here will provide accessibility to the unique programs in Auctioneering and Horse Training and Management which are offered at Lamar Community College.

14.	Otero Junior College	$ 16,709

The recommendations included in the State Plan will make all essential facilities accessible to the handicapped students attending Otero Junior College, as well as to members of the surrounding community.

15.	Fort Lewis College	$ 30,650

While it would be highly desirable to make Fort Lewis College completely accessible to the handicapped, the natural location and terrain of the campus, combined with severe climactic conditions, especially during the winter months, makes Fort Lewis a lower priority than some of the other institutions in terms of both architectural and economic feasibility. In addition to making classes accessible, the renovations suggested will also make the campus accessible to the community and maintain Fort Lewis College as a cultural activity center for Durango.

16.	Western State College	$ 45,205

As with Fort Lewis College, the natural location and terrain of the campus, combined with severe climactic conditions during the winter months, makes Western State College less attractive to the handicapped than most of the institutions listed above. However, it remains possible and highly desirable to make certain facilities which are heavily used by the community accessible. The recommendations provide for maintaining the role of the college as a cultural and social activity center for the community.

17.	Southern Colorado State College (Orman Campus)	$ 59,380

The architectural nature of buildings on the Orman Campus, combined with the tendency to move those programs which are most attractive to handicapped students to the Belmont Campus, is the primary reason for the difference in priorities for the two Southern Colorado State College campuses.

18. Aims Community College $ 5,195

The Aims campus is basically accessible. Removal of the remaining barriers identified in this program plan will help to maintain the reputation of Aims as an accessible campus.

19. Colorado Northwestern Community College $ 18,325

Current and projected numbers of students are the reasons for the relatively lower priority of Colorado Northwestern Community College. The recommendations will provide minimal accessibility to the facilities by handicapped students.

20. Northeastern Junior College $ 58,610

In terms of current and projected numbers of handicapped students in attendance at Northeastern Junior College, the Task Force judged it to be infeasible to make all buildings accessible. However, removal of barriers in four top priority buildings will make it possible for handicapped students to enroll in selected, high interest programs.

21. Colorado Mountain College $ 12,091

As with Western State College and Fort Lewis College, the natural location and terrain of the campus, combined with climactic conditions, especially during the winter months, make Colorado Mountain College less attractive to handicapped students than many of the institutions listed above. In addition, the design and temporary nature of existing facilities cause extensive renovation to be architecturally infeasible. It is anticipated, however, that all new permanent academic facilities will be totally accessible. All recommendations are for the West Campus, and will provide interim solutions to make the campus minimally accessible.

Sub-Total Cost Estimate Category Priority II	$ 334,170
Grand Total for Statewide Plan	$2,913,239*

It should be understood that in the Task Force opinion, all recommendations above, both Category I and Category II, are justifiable requests and in keeping with established legislative intent.

Priorities were difficult to determine and are presented as a direct result of requests from funding agencies.

Implementation of all recommendations will provide handicapped students with access to higher education in Colorado, and will establish Colorado as a leader and model in meeting with the needs of this significant portion of the population.

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*All cost estimates in the plan have been escalated to assume a bid date for construction of July, 1975.

II. SURVEY BACKGROUND AND PROCEDURES

Several institutions of higher education presented requests for the removal of architectural barriers to the 1974 session of the Colorado Legislature. During budget hearings, questions were raised as to the total need, feasibility, and cost of barrier removal at all state colleges and universities. To answer these questions, the Colorado Commission on Higher Education initiated a study within which uniform definitions and guidelines were applied, and which resulted in development of this State Plan. At the March 29, 1974 meeting of the Commission, program planning funds, not to exceed $2,500, were provided for the purpose of developing the plan (Appendix A - page A-6).

To conduct the survey and to prepare the State Plan, a Task Force consisting of the following members was formed:

- Dr. Jerome F. Wartgow, Assistant Director of CCHE
- Dr. Hank Atkinson, Director of the Office of Services for Disabled Students at the University of Colorado, Boulder; Registered Professional Engineer; paraplegic in a wheelchair
- Mr. Steve Crawford, Fifth year Architecture student, University of Colorado
- Mr. Skip Howes, Fifth year Architecture student, University of Colorado

Mr. Crawford and Mr. Howes assisted in the survey as part of their final design project in the College of Architecture under the direction of Professor William Taber.

To accomplish the survey each school was requested to form a campus-wide committee or group to be concerned with the problem of architectural barriers on its campus. (Reference letter, CCHE to Presidents and Governing Board Executives, February 20, 1974, Appendix A).

Each school was requested to send a representative to a "Workshop on Elimination of Architectural Barriers" held on March 11, 1974 in Denver. A list of attendees is given in Appendix A. The workshop agenda included the following items: (a) procedures for conducting a needs assessment, (b) advice and information on how to do a physical "survey of accessibility" on each campus, and (c) instructions on preparation of a program plan for elimination of architectural barriers on each campus.

Following the March 11 meeting, the members of the Task Force visited each campus in the State (Appendix A - page A-5). These campus visits allowed the members to perform building surveys with the individuals at each institution involved with this project. These joint surveys served to develop a common understanding of information which would be required in each school's program plan. At the smaller schools the CCHE Task Force would often survey every building on campus.

In advance of the campus visits by the Task Force, each institution was requested to provide certain background information related to priorities, numbers of handicapped students enrolled and projected, and building floor plans and maps. A copy of the letter to institutions and related forms are contained in Appendix A, pages A-7+.

Following the campus visits, each school was requested to prepare a program plan for the elimination of architectural barriers using the format (Appendix A, page A-12) and planning cost estimates supplied by the CCHE. These program plans submitted by each school have been condensed and organized to form the data base for this comprehensive Statewide program plan. The CCHE Task Force has modified the program plans submitted by the schools in some cases to correspond to the uniform standards adopted for this report. In those cases where a program plan was not received from a school, the Task Force has developed planning cost estimates based on data obtained from the campus visit.

Prior to initiation of this study, the University of Northern Colorado and Colorado State University both received planning funds to prepare comprehensive plans and estimates for architectural barrier removal at their respective campuses. In addition, University of Colorado - Boulder, has in existence a program plan for architectural barrier removal on its campus. Construction funds for Phase I of the University of Colorado plan were appropriated by the 1974 legislature. These prior activities have been integrated into, and are consistent, with this Statewide Plan.

III. NEEDS JUSTIFICATION

In this section the number and nature of those having physical disabilities is discussed. Available statistical data on a national and a state level are reviewed and anticipated future needs are discussed. Finally, several arguments for the removal of architectural barriers are given.

A. Source and Nature of Disabilities

The presence of a significant number of individuals in society with physical disabilities is a comparatively recent phenomenon and is a result of advancements in Medical Science. For example, prior to World War II, a person with a severed spinal cord had a life expectancy of six months from the date of injury. Today, a spinal cord injury paraplegic can be expected to have a full chronological life expectancy equal to that of the total population.

The sources of physical disability are numerous. They include traumatic injury as a result of auto accidents, other accidents, and war. Birth defects resulting from various factors, disease, and ageing are other sources of disability which might be expected to occur in a student age population. Among the most common types of disability are:

1. Cardiac and circulatory system problems
2. Visual impairment, total blindness
3. Hard of hearing and deafness

4. Ambulatory disabilities
    a. Permanent injury from accident or war
    b. Post-Polio
    c. Cerebral Palsy
    d. Temporary (ski injuries, etc.)
    e. Brain injuries
5. Wheelchair disabilities
    a. Paraplegics
    b. Quadraplegics
    c. Hemiplegics
    d. Amputees
    e. Birth defects (spinal bifida)
    f. Arthritis

A recent trend which can be expected to continue is the desire of individuals with high levels of disability to attend college. Such a person might be someone with a high cervical cord injury who uses an electric wheelchair and requires some attendent care in the morning and evening. These people have been traditionally "dumped" in a nursing home or a similar institution. With adequate education and the proper type of assistance these individuals are more than able to be self-supporting, productive members of society.

Universities and colleges have traditionally served the "college" age group of 18 to 23 years. While this age group will continue to be the most numerous on campus, the future can expect to see increasing use of campus facilities by citizens of all ages. The need for continuing education will see increasing numbers of teachers, engineers, doctors, businessmen, etc. return to campus for refresher courses. The increasing percentage of the population above age 50 combined with their increased amounts of available time will also place a demand on the college resources. Both of these as well as the faculty and staff of the institution will contain individuals who will be affected by the various disabilities that are associated with advancing age. These disabilities might include cardiac problems, stroke effects, arthritis, and a general loss of strength and agility.

B. National Population Data

The population statistics for the physically handicapped in the United States in general state that one person in ten has some disability which prevents him from using buildings and facilities designed for the physically fit. The following sources provide a perspective for viewing the problem.

a. Congressional Record, Volume 118, No. 17, February 9, 1972, Senator Williams. "... there are more than 22 million adults in the United States with physical handicaps severe enough to limit in some way their ability to work. These include:

150,000	blind adults
60,000	paraplegics
400,000	epileptics
200,000	cerebral palsy"

"Today there are 7 million handicapped children in the Nation."

b. Wall Street Journal, February 16, 1973.

"According to the Veteran's Administration, about 330,000 Vietnam war veterans already have compensable service-connected disabilities; about 7% of those are fully disabled."

c. A report to the National Commission on "Architectural Barriers to Rehabilitation of the Handicapped," Department of Health, Education, and Welfare, December 1967.

"Every year, 100,000 babies are added to the population who are born with the kinds of defects that will require them to use crutches, braces, or wheelchairs all their lives."

"Every year the traffic toll mounts. It is estimated that at the present time there are about 125,000 paraplegics in the United States."

"Due to medical and rehabilitation advances, the number of aged and disabled people in the population is steadily increasing and fewer of them are housebound."

The following national data was obtained from the Statistical Unit of the Colorado Department of Health:

	Rate per thousand
Severe visual impairment	6.6
Hearing loss	4.0
Paralysis, partial or complete	8.1
Absence of a major extremity	1.4
Other impairments	94.8
Total	114.9

Based on a Colorado population estimate of 2,452,150, the State would have 281,752 individuals with significant physical impairments.

C. Colorado Population Data

Specific population statistics for the physically disabled in Colorado are scarce. Marvin E. Smith(1) quotes the 1970 Census data in which the number of handicapped in the 16 to 64 working age range is 121,230 or approximately 10% of that age group for the State.

The Division of Rehabilitation, Department of Social Services of the State of Colorado provided higher education support for 1,599 students for the 1972-73 school year(2). The Division of Rehabilitation has in the past recommended that those students with a high level of disability such as the need to use a wheelchair attend one of the following schools:

Out-of-State	University of Illinois
	University of Missouri
	Oklahoma State
In-State	Southern Colorado State College
	University of Colorado at Denver

The Division supported 35 students at out-of-state schools for the 1972-73 school year.

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(1) The Minutes of the Board of Regents of the University of Colorado, Exhibit B, Vol. 40, No. 2, September 27, 1972.

(2) Personal Communications, Dr. Parnell McLaughlin, Director, Division of Rehabilitation, Department of Social Services, State of Colorado, May 8, 1973.

The Director of the Division of Rehabilitation, Dr. Parnell McLaughlin, states:

"I feel that because of the burden placed on parents to send individuals to schools away from home, who are unable to attend their local college because of architectural barriers, many times a handicapped individual does not have the opportunity to go to college. I believe they should have the same chance and opportunities that non-handicapped individuals have in our tax-supported institutions."

D. Arguments for the Removal of Architectural Barriers

The expenditure of public funds for the removal of architectural barriers can be justified on a number of grounds:

1. The area of law with regard to discrimination on the basis of racial, religious or sexual distinction has had tremendous development within recent years. It can be argued that the existence of architectural barriers at a public, tax-supported institution constitutes a discrimination every bit as serious as that experienced in the past by other groups.

2. Section 503 of the Rehabilitation Act of 1973 requires that contractors and subcontractors who do at least $2,500 worth of work for the Federal Government not discriminate against disabled people, and that they make efforts to include qualified disabled people in their organizations. Contractors who do at least $50,000 worth of government business will be required to have a more vigorous affirmative action program. While at the present time (July 1974) the Government has yet to publish regulations

implementing this statute, it would seem logical that removing existing architectural barriers to the employment of disabled faculty and staff would constitute an important part of any proposed affirmative action program.

3. The expenditure of money to eliminate architectural barriers can be justified on an economic basis. Assume that $4,000 of tax funds are spent in capital construction per individual disabled student. As a result of obtaining a college degree assume that this individual's income is increased by $4,000 per year, of which 20% or $800 of the increase is returned to the government in the form of taxes. Thus, using these assumptions, which are believed to be reasonable, a return on invested capital is obtained in only five years.

4. The physically disabled individual of college age can be expected to have the same goals as his contemporaries. To deny him the access to and the benefits of a higher education is to relegate this individual to a lesser station in society. This will limit his or her personal independence and potential for development and will limit the potential contribution to society that this person could achieve.

5. Finally, the Colorado Architectural Barriers Statute (See Appendix B) passed in 1963, provided standards for making public buildings constructed with state or political subdivision funds more accessible to, and usable by, the physically handicapped. This document provides a plan for complying with the intent of that legislation in Colorado institutions of post-secondary education.

IV. TECHNICAL CONSIDERATIONS

A. Applicable Standards and Statutes

1. The "American National Standard Specifications for Making Buildings and Facilities Accessible to, and Usable by, the Physically Handicapped, ANSI AIIF.1 - 1961 (R 1971)" is the accepted national standard relating to barrier free design of buildings. This code has been adopted by the Federal Government and by many local and state governments as the technical standard which new construction should meet.

2. Colorado Senate Bill #47, which became effective in 1965, is essentially similar in its technical aspects to the ANSI Code AII7.I - 1961 (R 1971). This law applies only to buildings in Colorado which are constructed with tax funds. The law lacks adequate provisions for enforcement and for noncompliance penalties. The law also contains a provision that would allow exemption where its provisions would produce an "undue hardship on taxpayers."

3. Uniform Building Code (1973): The UBC is adopted by the Division of Public Works as its primary design policy for buildings. The 1973 revision of the Code contains several sections that related to providing barrier free design. Unfortunately, the design requirements in the UBC-1973 do not always correspond to those of Senate Bill #47 or the ANSI Code. Provisions of the UBC-1973 are generally less stringent than SB-47. Where conflicts exist, the provisions of SB-47 should

apply due to both its legal status and to the fact that its provisions will produce a design that has better accessibility for a broader range of disabilities.

B. Guidelines Used by CCHE During Campus Surveys

The design requirements of SB-47 add little or no additional expense to the construction cost of new buildings provided they are included in the original design. However, strict adherence to the technical provisions of SB-47 in removing architectural barriers from existing buildings would, in many instances, be very expensive for the benefit gained. For example, SB-47 requires that doorways provide a 32" clear opening, while the UBC requires only 28". Where an existing entrance door provides only a 30" clear opening, it was felt that this provides adequate (although not ideal) provision for access. Given that construction funds are limited, these monies might more appropriately be spent in other areas that will produce a greater total increase in accessibility. Examples of this philosophy are listed below.

-- Entrances: A principal entrance to a building should be accessible. Very often the main entrance to a public building has many steps, while a side or rear entrance may be at or close to grade.

-- Restrooms, Water Fountains, Telephones: A minimum of two accessible restrooms (one men's, one women's) and an accessible water fountain and a public telephone should be provided per building. With new construction, restrooms and water fountains should be provided on every floor.

-- Vertical Movement: The means of providing access to different levels within a building, whether by ramps or slight elevation changes, or by elevators for movement between floors will constitute a major expense in remodeling older buildings. Elevators have been recommended where they will provide access to fixed facilities not duplicated elsewhere on campus. These include principally laboratories (i.e. chemistry and biology labs, instructional shop, etc.) and library facilities. In the case of access to faculty and most administrative offices it was felt that the faculty or staff member in the inaccessible office could arrange to meet with the disabled student in an accessible area. When a general classroom is inaccessible, proper scheduling of class location and student registration into an accessible classroom can avoid the need for elevator installation. Elevators will be required in large general classroom buildings, however, as a large number of disabled students taking diverse classes would limit the possibility of class rescheduling.

C. The following pages briefly outline the criteria needed to evaluate an existing building's ability to accommodate the disabled. Both minimum and preferred standards are given to allow one to judge the degree of accessibility of a building. This section of the program plan was developed only to give a basic understanding of the needs of the disabled, and was used solely as a guideline in conducting campus surveys to identify architectural barriers to the handicapped.

1. Wheelchairs

The collapsible model of tubular construction is most commonly used. The standard model of all manufacturers falls within the following limits:(1)

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(1) Colorado Architectural Barriers Statute, Senate Bill #47, page 3.

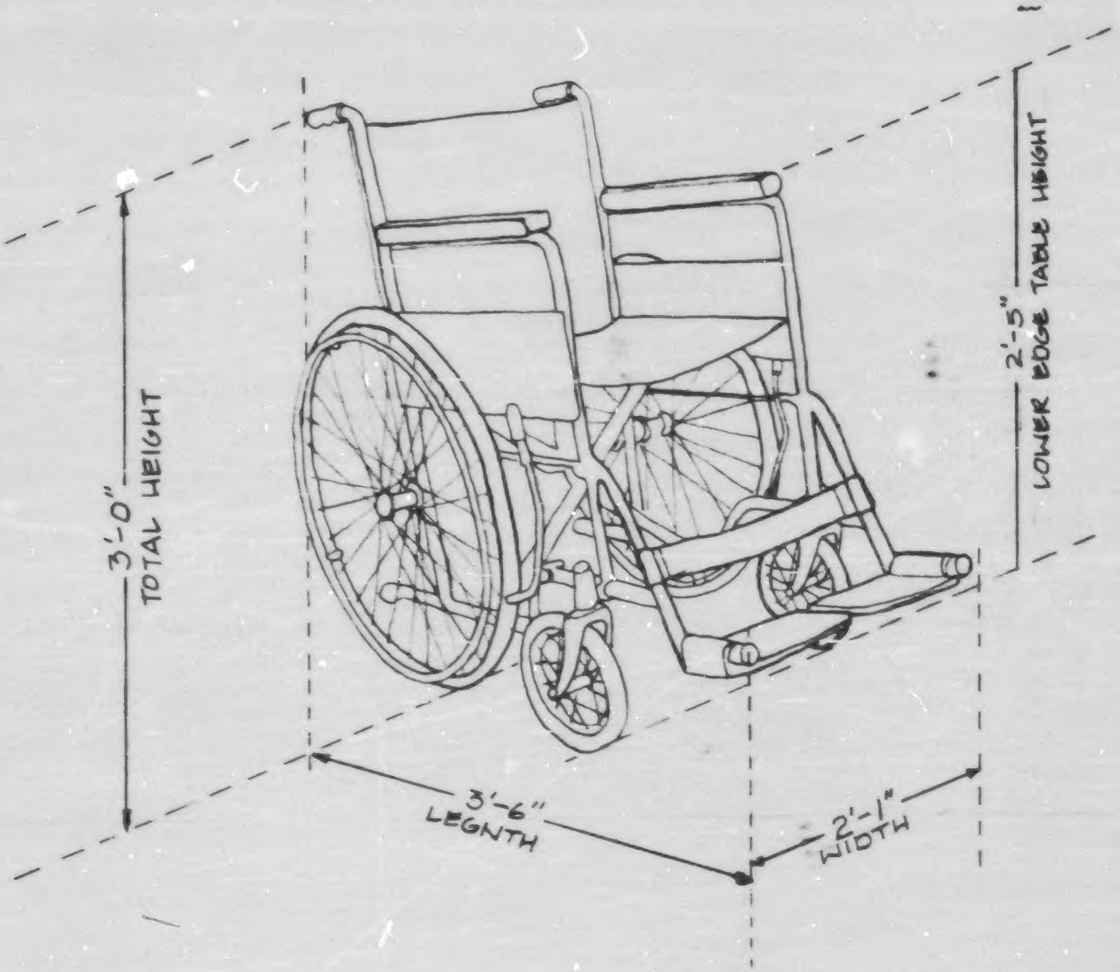
3'-0"
TOTAL HEIGHT
3'-6"
LEGNTH
2'-1"
WIDTH
2'-5"
LOWER EDGE TABLE HEIGHT

FIG. 1.1 STANDARD WHEELCHAIR DIMENSIONS [2]

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[2] GOLDSMITH, "DESIGNING FOR THE DISABLED"

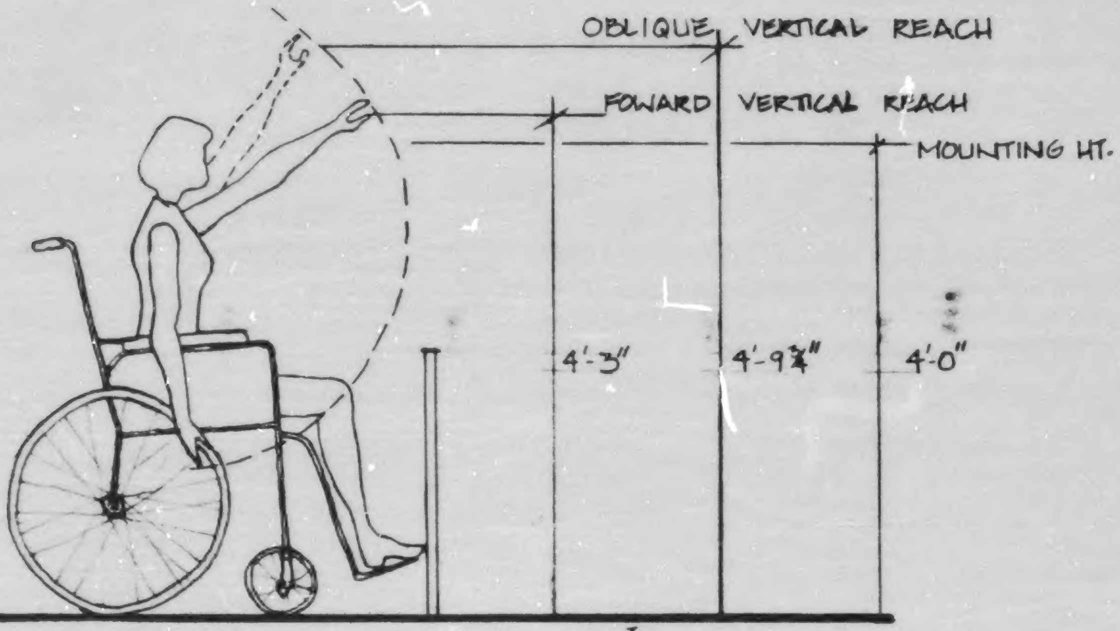
OBLIQUE VERTICAL REACH
FOWARD VERTICAL REACH
MOUNTING HT.
4'-3"
4'-9¾"
4'-0"

FIG. 1.2. ANTHROPOMETRIC DATA[3]

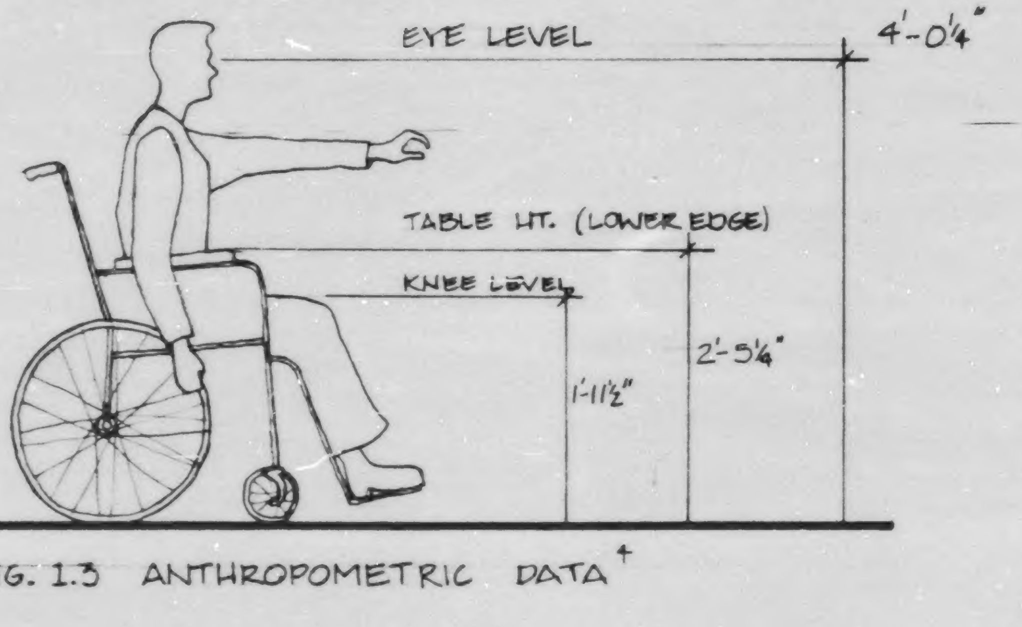
EYE LEVEL
4'-0¼"
TABLE HT. (LOWER EDGE)
KNEE LEVEL
1'-11½"
2'-5¼"

FIG. 1.3 ANTHROPOMETRIC DATA[4]

3, 4. GOLDSMITH, "DESIGNING FOR THE DISABLED"

a. Length: 3' - 6"

b. Width: (when open) 2' - 1"

c. Height of seat from floor: 1' - 7"

d. Height of pusher handles (rear): 3' - 0"

e. Width when collapsed: 11"

f. Average height of armrests: 2' - 5"

g. Average forward vertical reach: 4' - 3"

h. Average oblique vertical reach: (diagonally) 4' - 9"

i. Preferred mounting height: 4' - 0"

2. Circulation Spaces for Wheelchairs

1. The minimum clear width needed for forward movement in wheelchairs is 2' - 7" and 3' - 1" is preferred. Figure 2.1

2. The average turning space required when turning either 180° or 360° is 5' - 0". Figure 2.2

3. The minimum space needed to turn a wheelchair forward through a 90° turn is detailed in Figure 2.3

4. The minimum space required to negotiate a three point turn is shown in Figure 2.4

5. The minimum clearance needed for a wheelchair to pass through a doorway is 2' - 6". This will require a 2' - 8" door because of the obstruction of the hardware.(5)

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(5) Goldsmith, "Designing for the Disabled"

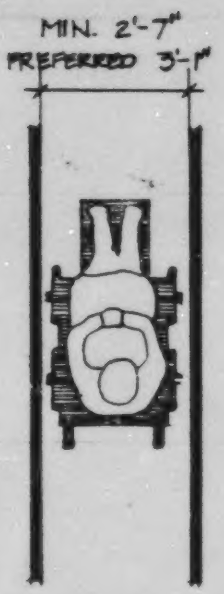
MIN. 2'-7"
PREFERRED 3'-1"

FIG 2.1 CLEAR WIDTH

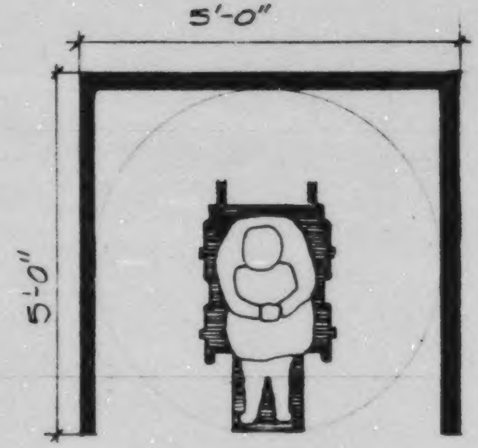

FIG 2.2 TURNING RADIUS

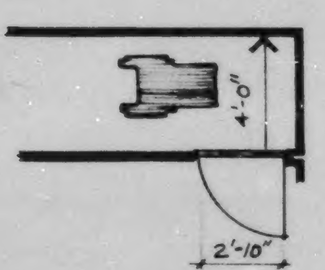

FIG 2.31 90° TURN INTO DOORWAY

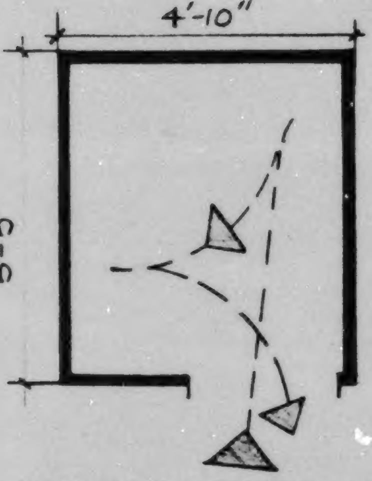

FIG. 2.4 3-POINT TURN

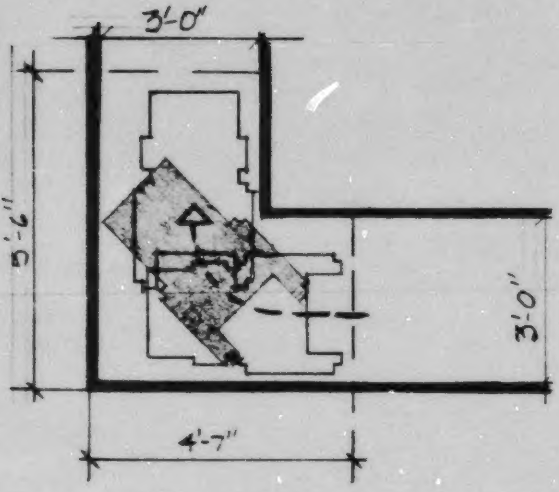

FIG 2.32 90° TURN PREFERRED

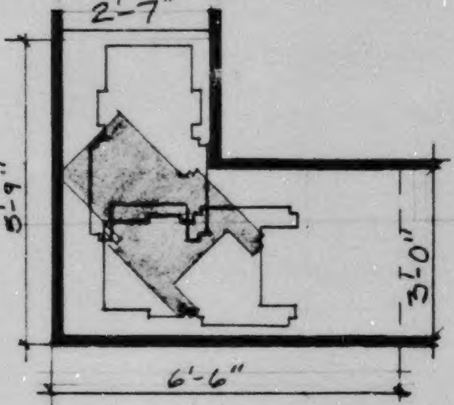

FIG 2.33 90° TURN MINIMUM

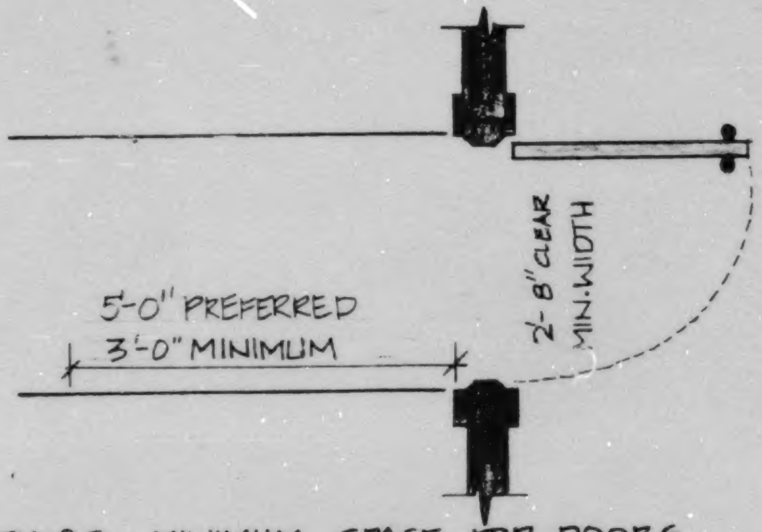
5'-0" PREFERRED
3'-0" MINIMUM
2'-8" CLEAR
MIN. WIDTH

FIG 2.5 MINIMUM SPACE FOR DOORS

3. Walking Aids and Crutches

Most individuals ambulating on braces, or crutches, or both, or on canes, are able to manipulate within the specifications prescribed for wheelchairs, although doors present a problem at times.

To allow for walking aids and crutches, passageways should be 3' - 0" minimum and doorways should be minimum 2' - 6" wide, giving an opening width of 2' - 4".(6)

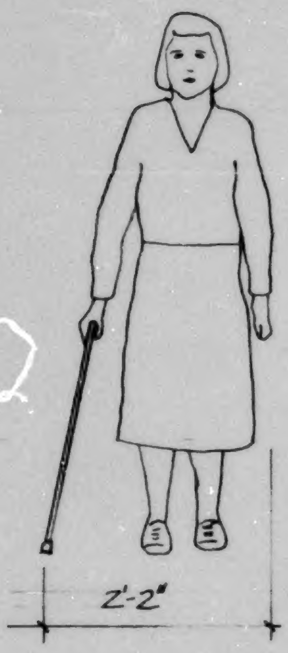

FIG. 3.1 STICK USER

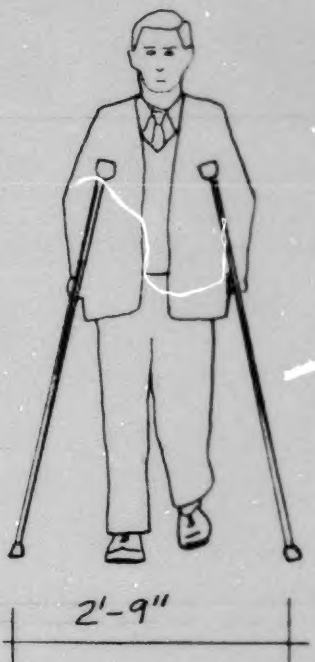

FIG. 3.2 CRUTCHES USER

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(6) Goldsmith, "Designing for the Disabled"

4. Doors

Doors shall have a clear opening of no less than thirty-two inches when open and shall be operable by a single effort. The floor in the inside and outside of each doorway shall be level for a distance of five feet from the door in the direction the door swings and shall extend one foot beyond each side of the door. Sharp inclines and abrupt changes in level shall be avoided at doorsills. As much as practicable, thresholds shall be flush with the floor.(7)

A maximum resisting moment of 9 foot-pounds is recommended for exterior doors and 5 foot-pounds for interior doors.

Doors to restrooms can pose problems to wheelchair users not having strength in their arms or to those using electric wheelchairs. Double swinging doors should not be used in a location where it will open into a hallway. Closely spaced doors in a tandem arrangement should be avoided.(8)

Where installed, swing doors should be glazed to minimize accident risk. To allow for wheelchair users, the base of the glazing ought not to be higher than 3' - 3" above the floor level.(9) Figure 4.1

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(7) Colorado Architectural Barriers Statute, Senate Bill #47

(8) Richard Henry Atkinson, Ph.D. "Program Plan for the Elimination of Architectural Barriers from the University of Colorado" 1973

(9) Goldsmith, "Designing for the Disabled"

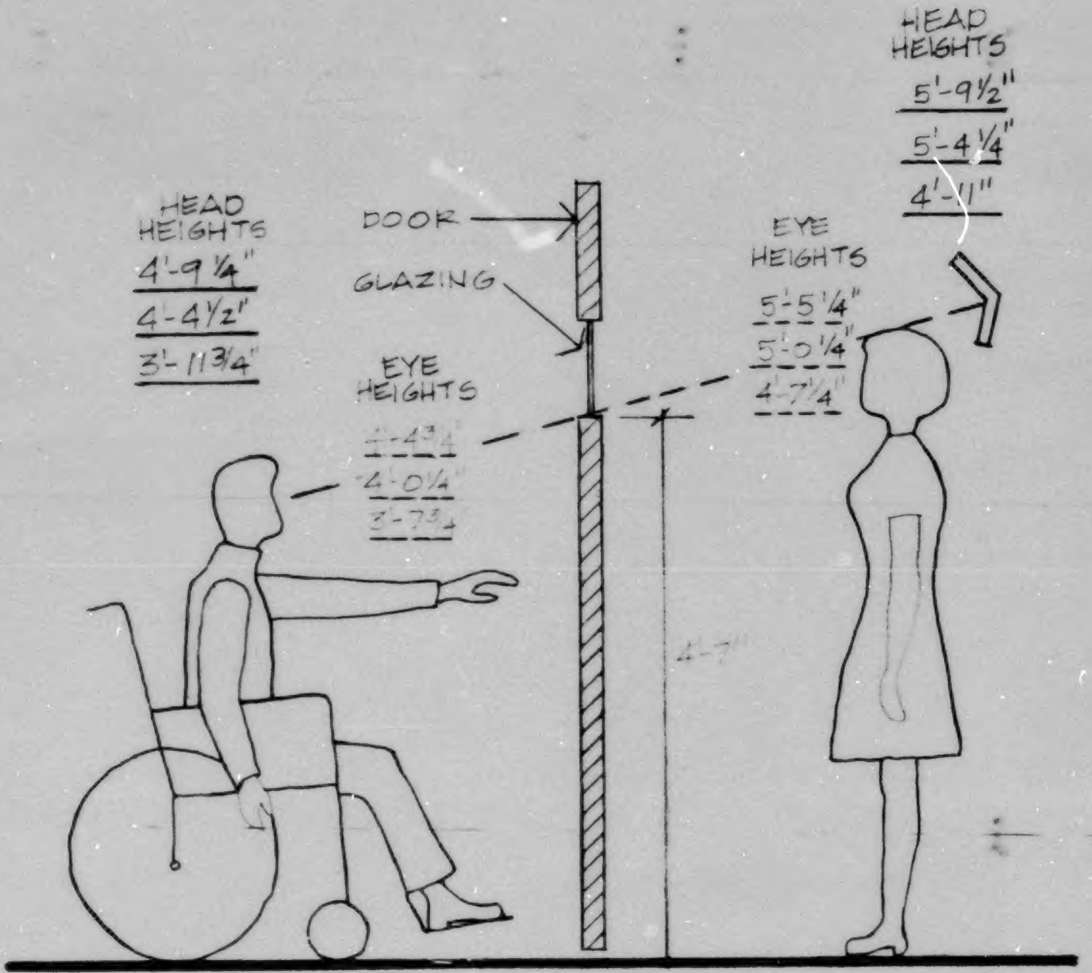
HEAD HEIGHTS
4'-9 1/4"
4'-4 1/2"
3'-11 3/4"
DOOR
GLAZING
EYE HEIGHTS
4'-4 3/4"
4'-0 1/4"
3'-7 3/4"
4'-7"
EYE HEIGHTS
5'-5 1/4"
5'-0 1/4"
4'-7 1/4"
HEAD HEIGHTS
5'-9 1/2"
5'-4 1/4"
4'-11"

FIG. 4.1 GLAZED EXTERIOR DOOR WITH STANDARD ANTHROPOMETRIC DATA.[10]

[10] RICHARD HENRY ATKINSON, PH.D., "PROGRAM PLAN FOR THE ELIMINATION OF ARCHITECTURAL BARRIERS FROM THE UNIVERSITY OF COLORADO. 1973"

5. Ramps

Ramps to or within buildings shall have a slope not exceeding one foot rise in 12 feet run (8%). Ramps shall be straight with any change in direction accomplished at level landings. Where exterior ramps are located on the north side of buildings, consideration should be given to installation of a heating element for the removal of snow and ice.(11)

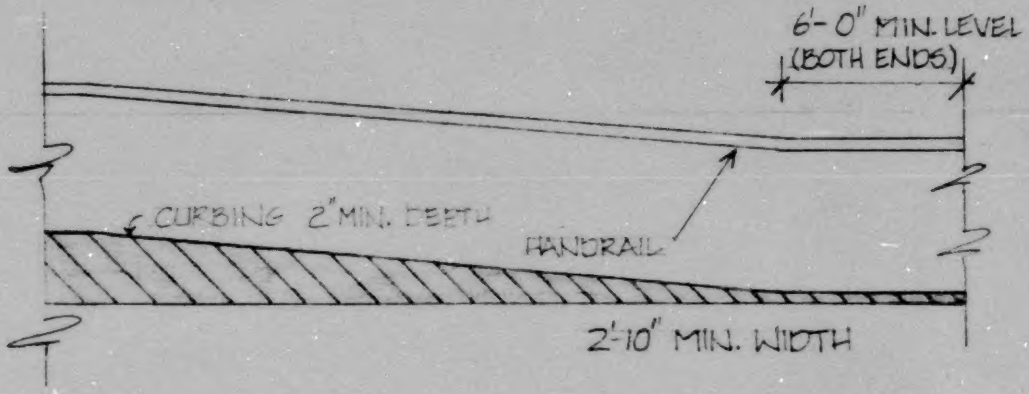
6'- 0" MIN. LEVEL
(BOTH ENDS)
CURBING 2" MIN. DEPTH
HANDRAIL
2'-10" MIN. WIDTH

FIG. 5.1 RAMP SECTION 1:12 (8%) MAX. SLOPE

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(11) Richard Henry Atkinson Ph.D., "Program Plan for the Elimination of Architectural Barriers from the University of Colorado" 1973

6. Handrails

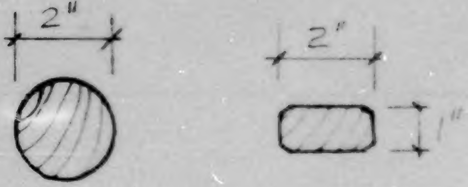
Handrails should be provided on each side of any exterior or interior staircase or ramp.

Handrails should be 32" high, measured from the tread nosing, and shall extend 18" beyond the top and bottom steps. The extensions serve two purposes:

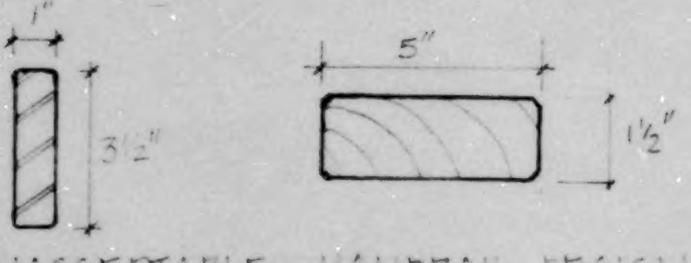
a. Support past the steps which is required by individuals on crutches and

b. An indication of the location of the steps to the blind.

A good handrail is one that can be grasped easily.(12)



ACCEPTABLE HANDRAIL DESIGN



UNACCEPTABLE HANDRAIL DESIGN

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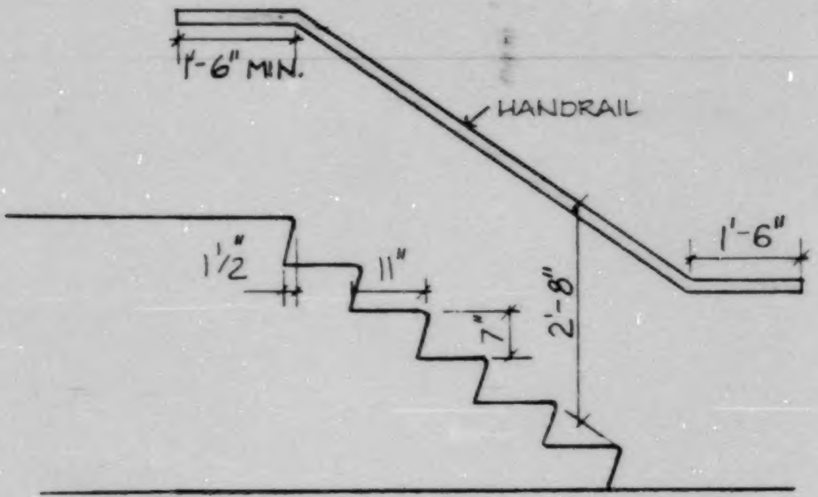
(12) Richard Henry Atkins Ph.D., "Program Plan for the Elimination of Architectural Barriers from the University of Colorado" 1973

7. Stairs

Projecting nosings and open risers on stairs are undesirable, since toes tend to catch them. Risers should not exceed 7" in height. Exterior stairs should have a minimum of 11" run (preferred 14½) and a maximum rise of 6½" (preferred 5 3/4").



7.1 STANDARD DIMENSIONS FOR STAIRS & HANDRAILS

8. Restrooms

At least one stall in each major restroom should be wide enough to accommodate a wheelchair inside it (with the door closed) and this stall should have enough space in it to allow a lateral transfer from wheelchair to toilet. Otherwise the severely disabled person in a wheelchair will be unable to use it. Mirrors, towel dispensers and shelves should be placed low enough for the wheelchair user.(13)

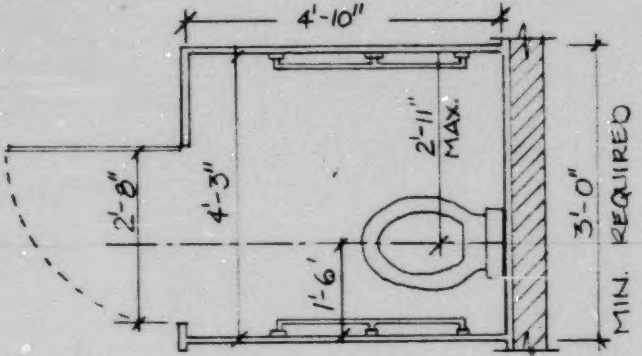


FIG. 5.1 BATHROOM STALL PLAN

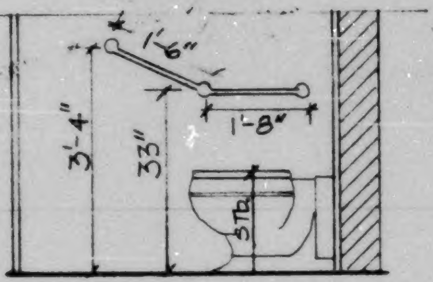


FIG. 5.2 STALL ELEVATION

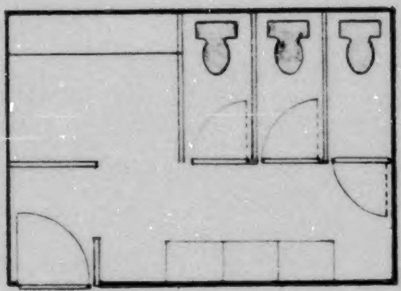


FIG. 5.3 BATHROOM PLAN

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(13) Information - Education Resource Support Unit "Washington/Alaska Regional Medical Program"

9. Public Telephones

Telephones should be placed within reach of those in wheelchairs with a height of no more than 4' - 0" from the floor to dial, coin-slot and receiver. Other critical dimensions are shown in Figure 9.1 and 9.2.

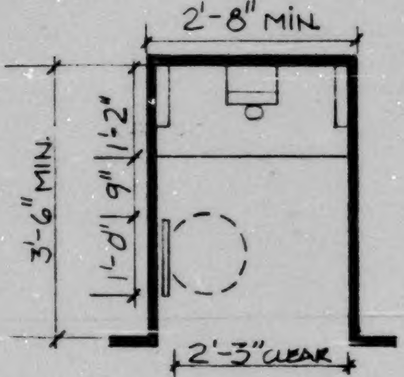
2'-8" MIN.
3'-6" MIN.
1'-2"
9"
1'-0"
2'-3" CLEAR

FIG 9.1 TELEPHONE BOOTH PLAN

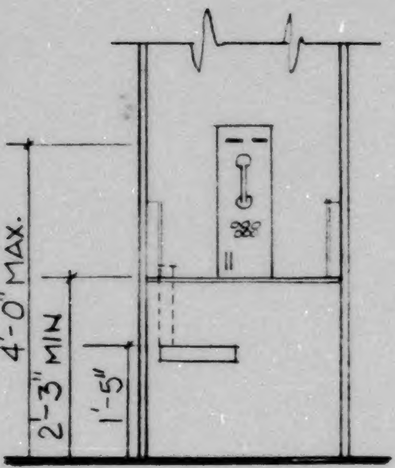
4'-0" MAX.
2'-3" MIN
1'-5"

FIG. 9.2 TELEPHONE BOOTH ELEVATION

10. Parking

Parking spaces, marked for the use of the handicapped, should be provided near building entrances to eliminate wheeling or walking behind parked cars. Parking spaces should have level access from the parking area to the building entrance.

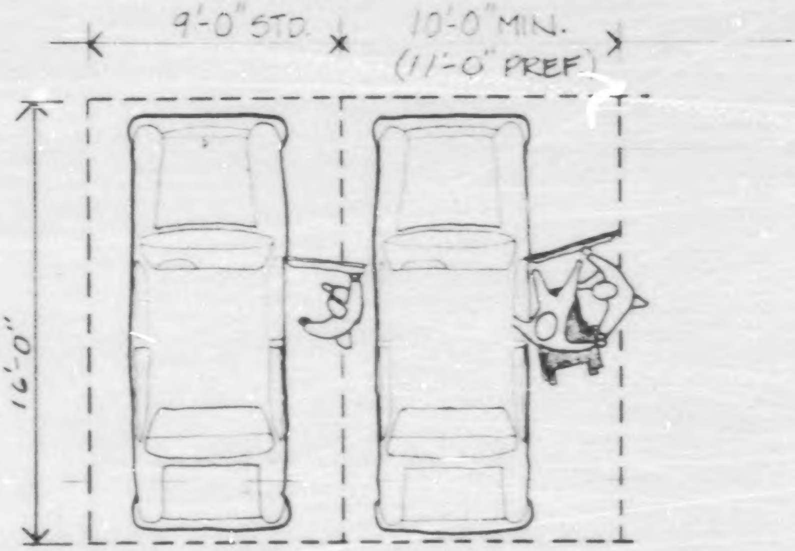

FIG 10.1 MINIMUM PARKING SPACE

11. Room Identification

It is important that rooms be identified for the general public and the blind. The sketch suggests a format of placement and provisions for the blind. Aluminized embossed tape strips are most often used for the Braille identification. Both the room number and the room function should be included.

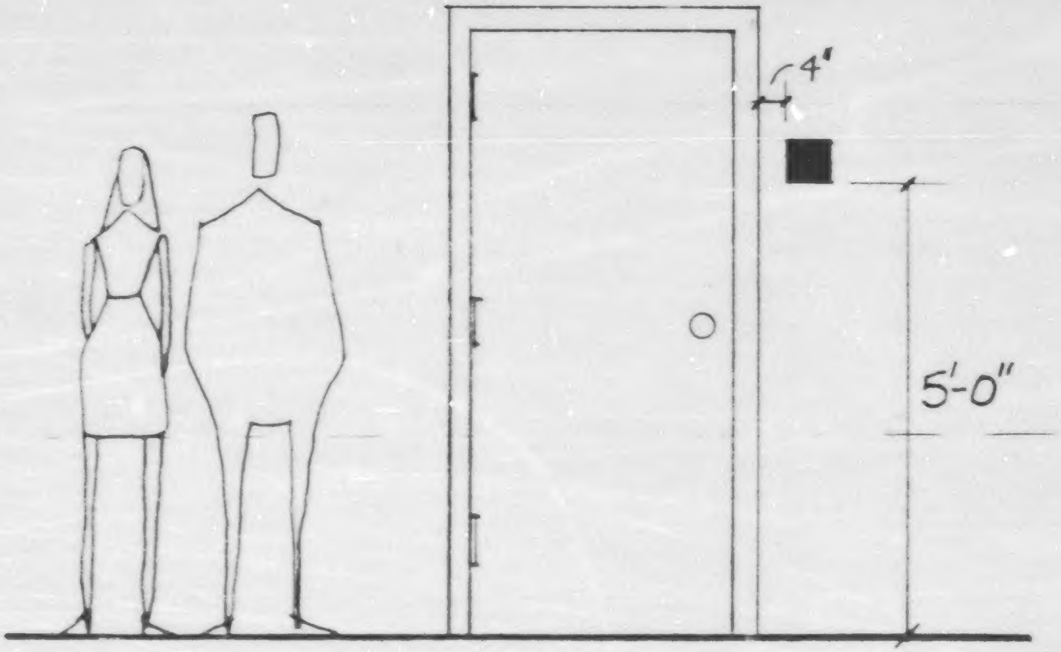

FIG 11.1 TYPICAL ROOM IDENTIFICATION

C. Cost Estimates

The following generalized cost estimates were prepared for purposes of assisting institutions to plan for the most economical and efficient means of making the campus accessible to the handicapped. It should be understood that the dollar amounts represent "average" costs only, and that a detailed architectural design was required for each job before a definitive cost estimate was prepared.

The cost estimates which follow reflect typical jobs under average conditions. Remodeling of older buildings may involve additional expense due to unanticipated structural, electrical, or plumbing conditions that cannot be identified until the project is underway. Additionally, expenses derived from architectural design, contingencies and cost escalation are not considered in these estimates.

1. Curb Ramps and Curb Cuts
   a. Curb Ramp - Hot asphalt mix with 4" drain pipe for gutter

      Cost: $100

   b. Curb Cuts - Concrete ramp cut into sidewalk from curb

      Cost: $150

2. Ramps to Buildings
   a. Exterior ramps involving cutting and removal of steps, forming of ramp walls, ramp surface and installation of handrails
   b. Interior ramps involving much the same type of work as exterior ramps but including extra expense of interior construction work and interior finish requirements

      Cost: $175 per inch vertical rise

3. Ramp Heating for Ice Removal

   a. Heating elements

      Cost: $3.50 per square foot

   b. Controls and wiring

      Cost: $600

4. Handrail Installation

   a. Includes fabrication, installation, and painting

      Cost: $16 per foot

5. Doors

   a. Automatic Doors

      Norton 200 series

      Cost: $2,600

      Installation and wiring

      Cost: $800

   b. Install vision panels in doors

      Cost: $150 per door

   c. Exterior 36" metal door. Includes dry wall, masonry, and panic hardware

      Cost: $1,500

6. Restroom Modifications

   a. Installation of a water closet with 20" seat, widening of stall and installing 32" door, installation of grab bars

      Cost: $1,300

b. Lower urinal

Cost: $400

c. Raise or lower sink

Cost: $200

d. Lowering of mirrors, shelves, towel dispensers

Cost: $200

e. If extensive plumbing, structural, and tile work is expected, the total cost of all of the above items is higher

Cost: $3,500

7. Drinking Fountains

a. Installation

Cost: $300 new

b. Cup dispenser, installation and stocking

Cost: $50

c. Lower existing fountain

Cost: $180

d. Add side fountain or bubbler

Cost: $175

8. Pay Phone Modification

a. Installation of mounting board

Cost: $100 new

b. Lowering of mounting board, includes patching and painting of old area

Cost: $125

Enclosure and instrument furnished by Mountain Bell at no charge.

9. Elevator Installation

   a. Hydraulic type, 4-stop, pre-engineered package

2,000 lb.	$18,000
2,500 lb.	$20,000

   b. Shaft Construction

   Wood frame wall or floor in building

   Cost: $20,000

   Concrete or masonry walls or floors in building

   Cost: $25,000

   Added expense may arise if rock is encountered when drilling the hydraulic piston hole.

10. Parking Spaces

   a. Repainting of lines and posting of sign to state that space is reserved

   Cost: $50

V. SURVEY RESULTS AND RECOMMENDATIONS

This section of the plan contains the results of the building by building surveys to identify architectural barriers on each of the campuses in Colorado.

Recommendations for each campus consist of building survey results, recommendations, and estimated costs of barrier removal. Also included in the recommendations for each campus, is a summary sheet of campus wide priorities.

AURARIA

The CCHE Task Force met with the Auraria Higher Education Center staff, as well as with planners from each of the three institutions that will share Auraria facilities. All new facilities to be constructed will be totally accessible to the physically handicapped and cost estimates are included in the Auraria construction budget. Therefore, this program plan includes no recommendations for funds to remove barriers at Auraria.

An initial draft of the design considerations and standards to be used in Auraria facility planning are included here for informational purposes.

Total Budget Recommendations	$0

design for the handicapped - dimensions

1

wheelchairs:

1. Width (open)	= 25"
2. Height	= 36"
3. Arm Rest Height	= 29"
4. Length	= 42"
5. Seat Height	= 19"
6. Pusher handles height	= 36"
7. Collapsed width	= 11"

anthrometric data:
(human measurements)

1. Reach - Verticle (one arm)	= 60"
- Horizontal (table)	= 30"
- Horizontal (two arms extended)	= 64"
- Diagonal (up)	= 48"
2. Eye Level	= 48"
3. Table Height-clear	= 30"
4. Knee Level	= 24"
5. Mounting Height (pref)	= 48"
6. Crutches-walking	
per. 5'-6" tip width	= 31"
per. 6'-0" tip width	= 31½"
7. Grasp-Rail	
Outside diameter not over	= 2"

circulation spaces:

1. Turning Radius	
Wheel to wheel	= 18"
Front to back	= 31½"
2. Turning Area - 360°	= 60"x60"
3. Passing (two wheelchairs)	= 60"
4. Forward Movement	
Clear width	= 31"
Preferred	= 37"
5. 90° turn - min. corr. width	= 36"
6. 3 - point turn	= 58"x65"
7. Doorway clearance	= 30"

design for the handicapped - standards comparison

circulation

2

	publications					
	a.s.a. & colo senate bill 47	u.b.c	c.c.h.e.		n.y. state univ. construct fund	chicago municipal code
parking	•Identify parking areas for use by handicapped •12' wide bays req'd. •Avoid conditions requiring movement to facilities behind cars	•None	•Near facility served •Mark spaces •11'-0" wide bays •Level access to bldgs. •Eliminate movement behind cars		•Near facility served •5% bays reserved •9' wide bay w/4' everyother bay •Ramps @ level change •No movement behind cars or across traffic to facilities	•2% bays reserved •12' wide bays req'd •Adjacent to pedestrian entrance
walkways 0% to 3% = walks 3% to 5% = walks w/ frequent level areas	•Min. 48" wide •Grade earth to attain level entry to facility •Continuous common surface w/no interruptions •Level platform @ top of walkways min. 3'-0" x 5'-0"	•None	•None		•Min. of 1 access w/o steps to ea. facility •Non-slip paving •Walks over 5% grade require level rest areas @ 60' •Ramps @ intersection with streets •No gratings or manholes on walks	•Min. of 1 primary entrance or exit accessible to handicapped
ramps 5% to 8% - max. 8% to 10% - abs. max. (rest every 30'-0") Minimum width 36" between curbs.	•Max. slope 8% •Handrails on at least 1 side 32"high •Non-slip surface •5' x 5' level area for outswing door; 3'x5' with no door •Min 6' straight clearance @ bottom •Level platform @ 30'-0"	•Changes in elev. by ramp •Level plat. @ top min. 5' where door opens out •10% max slope •5' landings on ramps over 6.6% @ 5' vert. points •6' landing @ bottom Handrails on ramps over 6.6%	•Maximum slope 8% •Ramps straight with direction changes at level areas •Heating under ramps on N. side of bldg. for ice removal •Handrails on both sides of ramp		•Only where grade level entrance not available •Non skid surface •Rest area @ 30' min. 4'-6" long •Level 6' approach •Rails both sides @ 32" height •5'-0" level platform at door	•Max slope 1':12' •Min width 36" •Non skid •25 SF rest every 30' min. dimen. 4'-6" (also top & bottom) •Rails @ 32"-34" high 1 side min. Extends 1' over top & bottom •36' w. turns @ level platforms

	publications					
	a.s.a. & colo senate bill 47	u.b.c	c.c.h.e.		n.y. state univ. construct fund	chicago municipal code
stairs Exterior & Interior	Exterior No abrupt nosings Handrail @ 32" 18" extension @ top and bottom Conformance with exist. step formulas Interior 7" riser maximum when possible Same as above.	Stairs & ramps same width requirement	Projected nosings & open risers undesirable. Max. risers 6-½" (pref. 5-3/4") min. tread 11" (Pref. 14-½") on exterior Rails 32" high extend 18" @ top & bottom		Exterior Well lit Riser 5-3/4" high - max; tread 14" wide - maximum Non-skid surface Rails 32" high - extend 30" @ top and bottom Interior 7" riser max. Rails @ 32" extend 18" at top & bottom	
doors Exterior, Interior, Vestibules, Glazing, Hardware.	Min. 32" when open Single effort pressure Level floor 5'-0" from door in direction of swing 1'-0" each side Avoid level changes at door Threshold flush with floor	Level floor 5'-0" from door in direction of swing Max landing @ 1" below threshold	Clr. opening 32" min. Single effort open. pressure 9 lbs. exter. 5 lbs. int. 5'-0" level floor both sides of door 1'-0" level area to each side of door Avoid level changes at door Flush thresholds Avoid double doors opening in hallway Avoid closely spaced doors in tandem Glazing: Max. height of glaz 3'-3" abv.fl.		Vestibules-min. depth 6'-6" Clear opening 32" Max pressure to open door 8 lbs. Threshold 3/4" high maximum Hardware Knurled handles as warning to blind 42" above floor Horiz. levers pref. Protrude handle on sliding doors Viewing Panels Glazing in all swinging doors @ 3' max. height off fl.	36" clear level space when door is 90° open position 36" min for single exterior door 30" min. on inter. door Opening pressure 10 lbs. max. Vestibules min. width 4'-6" Hardware Knurled handles on selected doors as warning to blind

design for the handicapped - standards comparison

circulation

4

	publications					
	a.s.a. & colo senate bill 47	u.b.c	c.c.h.e.		n.y. state univ. construct fund	chicago municipal code
floors	Non-slip surface Common level throughout or connected by ramp	None	None		None	None
corridors	None	None	Min. width 5'-0"		Min width 5'-0"	None
elevators	Available at all public levels of building Allow for wheelchair traffic	Provide elevator for handicapped at public levels of building	None		Elev. platform level with floor Cab size minimum 5'-1" x 5'6" Door with safety edge plus sensing devise (photo-elect. eye) No control over 4'-0" from floor	In all new public buildings over 2 floors (except where ramps provided) Emergency controls not over 4'-0" from floor

design for the handicapped - standards comparison
sanitary facilities

	publications					
	a.s.a. & colo senate bill 47	u.b.c	c.c.h.e.		n.y. state univ. construct fund	chicago municipal code
toilets- **Number**	Appropriate number to use and nature of building	None	1 per major restroom per sex. Toilet stall located most distant from entry		At least one per sex per floor Located most distant from rest room entrance	1 per 500 occup. per sex in each building
-Stalls	Min size 3' wide by 5' deep Door clearance 32" swings out Handrails on both sides 32" high and parallel to floor 1½" dia. w/1-½" clearance to wall Fastened securely @ ends and center.	None	Min 3' x 4'-8" max. 4'-3"x5'-0" Door clearance 32" swings out Toilet off center Centerline @ 1'-6" from wall Grab bars both sides sloped section from 40" to 33" and horiz. section @ 33" abv.fl. Toilet seat @ standard height		Min size 3' wide 4'-10" to 5'-6" deep Door clearance 32" swings out Grab bars 1½" in dia. w/1½" clearance from wall on both sides 33" above floor Toilet seat should be 19" above floor	Min size 3' wide by 5' deep Door clearance 32" swings out Grab bars on each side outside dia. 1½"-33" above fl. w/1½" clearance from wall Toilet mounted 19" from floor
-Fixtures	Sinks Narrow aprons useable by handicapped (high. than average) Mirrors & Shelves Max. height 40" abv. fl. (top of shelf, bottom of mirror) Urinals Wall mounted @ 19" or floor mounted Towel racks, dispensers 40" abv.flr.	Sinks Space under 1 bowl w-26"xh-24"xd12" Mirror 1 @ 40" from floor Other Towel & disposal fixtures 40" from floor	Mirrors towel dispensers & shelves within reach of wheel chair user (reach limit 4'-3" abv.flr.)		Sinks Min 26" clr. space below sink All handles easy to operate (levers) Hot water lines & drains shielded Mirrors bottom edge 3' abv.fl	None

design for the handicapped - standards comparison

program areas

6

	publications					
	a.s.a. & colo senate bill 47	u.b.c	c.c.h.e.		n.y. state univ. construct fund	chicago municipal code
assemblies	None	Ramps - max 10% slope	None		No special consid. where space is level & seats are moveable Fixed seats-allow 1% student stations for handicapped Fixed seats-level space to be provided in optimum viewing areas	Provide clear level space for wheelchai users Locate so as not to interfere w/egress from fixed seating w/fixed seating viewing stations according to follow less than 50 seats 2 spaces 51-400 seats 4 spaces over 400 seats even number not les than 1% of total
dining areas	None	None	None		Direct access from circulation Clearance under table-30";aprons recessed 1'-0" 5'-6" betwn tables Outside rail on tray slides 34" Aisle btwn tray slide & control rail 34" minimum	None
laboratories	None	Ramp-max 10% slope			Labs w/over 24 stations should have 1% for handicapped Each station low work bench w/30" clr. to flr. & no apron Min. aisel 3'-0"	None
physical educ	None	None	None		1% of lockers avail. to handicapped	None

design for the handicapped - standards comparison

program areas

7

	publications					
	a.s.a. & ohio senate bill 47	u.b.c	c.c.h.e.		n.y. state univ. construct fund	chicago municipal code
spectator areas	None	None	None		1% of spectator stations should be dedicated to handicapped These areas should be easily accessible to exits All spaces for handicapped should be level.	(See assembly)
libraries	None	Ramps - max 10% slope	None		1% of study carrels accessible to wheelchair Aisles between stacks 4'-0" min. width Table should have 30" min. clearance to floor	None

design for the handicapped - standards compariso

specialitie

8

	publications					
	a.s.a. & colo senate bill 47	u.b.c	c.c.h.e.		n.y. state univ. construct fund	chicago municipal code
drinking fountains	Appropriate number accessible to physically handicapped Up-front controls and spout Hand operated or hand and foot operated	Upper edge no more than 33" from floor Up-front controls Alcoves must be 32" wide-minimum	None		Upper edge no more than 36" above floor Controls & spout located @ front Recessed areas for fountains min. 3' wide	Upper edge within 36" of floor
telephones	Appropriate number accessible to physically handicapped Dial & handset can be reached by wheelchair user Identify telephone for use by persons w/hearing disabilities	Telephone access w/ all elements no more than 48" above floor Booth clearance 32" min.	Min. dimensions for booth 2'-8" wide and 3'-6" deep Seat should be hinged Max. heights-dial, coin slot and receiver 4' above floor		One phone accessible per "bank" to handicapped Phone should be outside a booth Dial 36" to 48" above floor	None
switches & controls	Controls of frequent or essential use placed within reach of wheelchair user	None	None		No more than 2 switches located on plate 36" to 42" above floor Outlets not less than 18" above floor 24" height ideal	None
vending machines					Controls & access between 24" & 48" from floor. Pull knob tension less than 8 lbs.	

design for the handicapped-considerations

9

deaf

1. Visible signals as warnings
2. Visible signals on telephones and other equipment used by deaf

blind

1. Raised letters and numbers for rooms and offices located on wall adjacent to entry @ 5'-0" off floor on side of handle.
2. Knurled handles on doors not intended for normal use or where danger exists.
3. Extension of rails at top and bottom of stairs to warn of level change.
4. Audible signals as warning
5. Avoid access panels, manholes and grates in passageways-barriers and warning signals should be placed 8'-0" in all directions of open work in circulation paths.
6. Ramping at curbs may constitute a danger to the blind which use curbs to identify location of streets
7. Embossed tape on panic door handles will help blind in identifying where door leads.

other

1. Passage between buildings in covered structures (tunnels or bridges) accessible to handicapped where possible.
2. Counter heights should be low when use by wheelchair user is expected i.e. libraries, information areas and registration.
3. Where escalators are used units should be specified which have mated speed on rail and tread movement.
4. Where passenger pick-up and discharge areas are provided, care should be taken to ensure that the entry they serve is accessible to wheelchai
5. Entrances used by handicapped should be open to public at all times building is in operation. Elevators should be accessible from this entran
6. Automatic doors should have pressure-sensitive contact floor mats on both sides, not time-lapse devices.
7. Double action swinging doors constitute danger in areas used by blind and wheelchair user

design for the handicapped - publications

10

codes : • Senate Bill No. 47; General Assembly of the State of Colorado May 27, 1965.

• Municipal Code of Chicago, Ammendments Chapters 47, 54, 66, 67, 194, City of Chicago, Department of Buildings April 26, 1973

• Uniform Building Code, 1973 Edition, International Conference of Building Officials; Whittier, California

standards : • Colorado Commission on Higher Education, "Architectural Barriers Study", March 1974.

• "Making Facilities Accessible to the Handicapped" State University Construction Fund, State University of New York Albany, New York July 1967

• American Standards Specification - "Making Buildings and Facilities Accessible to, and Usable by, The Physically Handicapped" - October 31, 1961 American Standards Association.

"Housing for the Physically Impared - A Guide to Planning and Design" United State Department of HUD 1967

"Design for All Americans" - Report of National Commission on Architectural Barriers to Rehabilitation of the Handicapped.

surveys : University of Colorado, Office to Aid Handicapped Students, Architectural Survey

Colorado Governor's Committee to Promote Opportunities for the Handicapped, Inspection for Accessibility Decal

Architectural Barriers Survey

articles : "Buildings for All to Use", AIA Journal March 1969

other : AIA Folder - Articles, Check-lists, Reports, etc.

note : • Indicates sources used in comparative study. — Auraria 5. Denver

UNIVERSITY OF COLORADO - BOULDER

The University of Colorado - Boulder, had completed an extensive study and had an approved program plan for elimination of architectural barriers on file with CCHE prior to the decision to develop the Statewide Plan.

The plan calls for a total of four phases, the first two having been funded and implemented at $40,700 in 1973 and $234,890 in 1974. Phase three requires $250,779 with the final phase of $270,481 completing the plan and thereby creating an accessible campus.

CCHE supports the UC-Boulder Capitol Construction Request for $250,779 in FY 1975-76, and recommends that this continuing project be funded directly to the University of Colorado. The plan has been reviewed by the CCHE Task Force and is consistent with, and an integral part of, the overall Statewide Plan.

Total Budget Recommendations, Phase III	$250,779 (FY 1975-76)
Phase IV	$270,481 (FY 1976-77)

UNIVERSITY OF COLORADO - COLORADO SPRINGS

All new buildings on the Colorado Springs Campus of the University of Colorado will be planned to comply with the CCHE Guidelines and accessible to the physically handicapped.*

CCHE recommendations for renovation of existing facilities are listed in priority order as follows:

	UC-CS Request
Main Classroom Building	$8525
Dwire Hall	975
Manor Building	200
Total Budget Recommendations	$9700

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*On the recommendation for the Main Classroom Building for ramps, alternative B1 was found to be the most reasonable estimate.

UNIVERSITY OF COLORADO AT COLORADO SPRINGS
COLORADO SPRINGS, COLORADO 80907

OFFICE FOR STUDENT RELATIONS

June 24, 1974

Dr. Jerry Wartgow, Chairperson
CCHE Committee on Elimination of Architectural
Barriers to the Handicapped
Colorado Commission on Higher Education
719 State Services Building
Denver, Colorado 80203

RE: University of Colorado at Colorado Springs
Committee Recommendations

Dear Dr. Wartgow:

The University of Colorado at Colorado Springs Committee on the Elimination of Architectural Barriers to the Handicapped has committed itself to making the University accessible to handicapped, disabled and elderly people. The structures on the Colorado Springs campus are of varying ages which create different problems related to construction and costs.

The main classroom building will be the largest and most costly project because of its age. The building was originally a sanitarium for victims of tuberculosis. The structure at that time was constructed for patients, many of them with some type of handicap. When the University purchased the building much construction was performed to convert it into a more functional academic setting. The new construction at that time created many of the barriers we are now faced with. For example, narrower doors were installed in restrooms, ramps were removed and steps installed, the elevator was converted from automatic to key operated and various smaller items such as inaccessible drinking fountains, short hand rails, etc., were also installed. The committee is now faced with the cost of making some improvements or returning the building to its previous configuration where possible.

Dwire Hall and The Manor Wing, the other two main buildings, are not far from meeting the minimal requirements needed to serve the handicapped. The few recommendations for change are noted in this building analysis section. Future buildings and construction will be constructed with the handicapped in mind.

The primary goal of the committee will be to make the campus more than minimally accessible to the handicapped, the disabled and the aged. The second goal or consideration of the committee will be to monitor and correct, if necessary, the type of services being offered to the handicapped student by all the departments of the University.

Another important factor will be the need to identify all persons attending school here either as a full-time student or part-time student and maintain continued contact with these people to assure proper delivery of services to them on campus. Another consideration will be to develop community contacts with agencies or persons involved with services to the handicapped. Periodic evaluation of service needs and enrollments must be made to assure proper expansion in relation to the handicapped person's needs.

The University of Colorado at Colorado Springs is situated along a bluff and until recently was relatively inaccessible even to non-handicapped persons due to the unavailability of public transportation to the campus area. Although the city has expanded its service to the Cragmor area, handicapped students must still be brought by friends or relatives to the campus and then picked up after classes. With our recommendations for parking, loading and unloading, and communications with the Health Association's handicapped transportation service, we will be greatly relieving this problem. There is a small charge for this service and many times the handicapped person may not be able to pay the charge. The committee feels that we should have the flexibility to either pay for needy disabled persons or waive the charge for them. This would, of course, incure an additional cost factor to our center.

Presently the University at Colorado Springs has a small number of handicapped students enrolled. The following is a list of the different types of handicaps these students are inflicted with and the number in each category.

1.	Visual Impairments	3
2.	Hearing Impairments	2
3.	Cerebral Palsy	1
4.	Paralysis - Illness or Accident (Parapaligics)	4
5.	Absence or Amputation of Major or Minor Members	4
6.	Psychotic Disorders	0
7.	Asthmatics	5
	TOTAL	19

This count is not accurate because a record-keeping system for this particular program has not been developed. We [illegible]d have some success in exploring the Pikes Peak region for statistics but it will still be very difficult to determine how many of the persons counted would be willing or able (even with the campus made accessible) to come to college. We will include all the handicapped persons counted in our projection and list them according to age group and handicap. The agencies which gave us what we felt to be the most accurate counts were the Health Association of the Pikes Peak Region, the local Division of Vocational Rehabilitation and the Cerebral Palsy Association.

Handicap Catagory	*Number	Ages
Persons restricted to wheelchairs		
Accident	150	16 - 40 years
Illness	100	25 - 60
Congenital	150	16 - 50
Persons able to drive but must use wheelchair 100% of time out of car	50	18 - 30
Ashmatics	300	16 - 40
Blind	100	16 - 40
Cerebral Palsy	50	16 - 40
Amputees		
Major extremities	150	18 - 40
Minor extremities	200	16 - 60
Arthritics		
No Count (Different Degrees of Disabilities)	80 - 90% of all adults	
TOTAL	1,250	

*(ALL NUMBERS ARE APPROXIMATE)

The University has a unique program which should also be available to the handicapped of the entire state. This would increase the projected possibilities for more handicapped persons who would attend.

The new program, which is unique to any state institution for higher education will lead to a B.S. degree in Resource Systems Analysis. A brochure is attached which explains the program in detail. Most of the courses offered in this program will be housed in Dwire Hall, which is accessible to the handicapped except for the few recommended revisions listed in our survey.

As stated previously, the buildings are in various stages of accessibility due mostly to their age. The committee has assigned priorities mostly by the amount of work needed to remove barriers plus the percent of student use of the particular building. The main classroom building stood out by far as a number one priority building, because it is the oldest of the three main structures and houses the majority of the classroom spaces and also houses many administrative and student service areas.

Dwire Hall would be next in relation to use because of its tenents: the library, the auditorium, laboratories, classrooms and faculty offices.

The building listed as third priority was the Manor Wing. This section houses primarily administrative offices of the different schools such as Education, Business, Letters, Arts and Sciences. The Chancellor's office is also housed in this wing.

The committee feels that our recommendations as submitted will make the three main buildings minimally accessible to the handicapped. Since other buildings are being planned, the committee will take it upon itself to monitor each phase of construction to assure the handicapped student accessibility beyond the minimal standard.

The remaining buildings (not listed in the priorities or in the survey but which are on campus and are being used presently) are scheduled in the master plan for razing. These buildings are as follows:

1. Psych-Arts Building

   Uses - faculty offices and Affirmative Action office

2. Cottages (Psychology Labs)

   Four each - They are completely inaccessible to the handicapped.

3. Fine Arts Building (sculpture)

   First floor is minimally accessible but will also be torn down for expansion purposes.

4. Main Fine Arts Building

   Used for painting classes. It is a single floor, temporary butler building which is presently accessible to the handicapped.

The following are the committee's recommendations for immediate renovation of the buildings indicated. We also request the Colorado Commission on Higher Education to provide our committee with funds as soon as possible so that the necessary changes can be accomplished.

RECOMMENDATIONS:

(Listed in priorities, not related to cost)

I. Parking stripes and handicapped designator signs. Three reserved parking spots are needed.

   A. West entrance to Classroom Building
   B. Rear entrance Dwire Auditorium
   C. South entrance to Manor Building
   D. Cost $150

II. Re-vamping restrooms

   A. Dwire Hall

      1. Women's first floor

         a. Lower towel dispenser
         b. Install shelves
         c. Lower mirrors or install full-length mirror
         d. Insulate pipes
         e. Cost $200

2. Men's first floor
    a. Lower mirror or install full-length mirror
    b. Lower towel dispenser and shelves
    c. Insulate pipes
    d. Cost $200

B. Main Classroom Building

1. Women's (in front of switchboard)
    a. One stall must be completely modified to conform to standards
    b. Install 20" seat
    c. Widen stall
    d. Insulate pipes
    e. Lower shelves and towel dispenser
    f. Cost $1,500

2. Men's (in front of switchboard)
    a. One stall must be completely modified to conform to standards
    b. Install 20" seat
    c. Widen stall
    d. Install grab bar
    e. Insulate pipes
    f. Lower mirror, shelves and lower dispensers
    g. Cost $1,500

3. Main Classroom Building restrooms in front of switchboard can serve Manor Building. Buildings are joined together and accessible from two designated entrances.

III. Drinking fountains

A. Dwire Hall

1. Front - first floor lobby
    a. Install and stock cup dispenser
    b. Cost $50

B. Manor Building

1. First floor - hall - wall mounted

a. This water fountain is recessed into wall and is inaccessible to the handicapped wearing arm and hand braces.
b. Install cup dispenser
c. Cost $50

C. Main Classroom Building

1. First floor - hall - floor mounted

a. Install bubbler
b. Cost $175

IV. Curbs

A. Manor Building

1. South entrance - ground level

a. Curb cut
b. Cost $100

V. Doorways

A. Main Classroom Building

1. Women's restroom - first floor - in front of switchboard

a. Designated as restroom to be used by handicapped
b. Original wider wooden (lighter) door should replace present metal door
c. Cost $200

VI. Wheelchair spaces in auditorium

A. Dwire Auditorium - Dwire Hall (main floor)

1. Remove two (2) permanent seats on rear aisle row (floor is level on this row)
2. Cost $50

VII. Ramps

- A. Dwire Hall
  1. Install ramp to second floor patio
  2. Cost $400
- B. Main Classroom Building
  1. Install ramp on third floor to elevated landing. This ramp will make the student quiet lounge, student government offices, language lab, and restrooms available to handicapped students on upper floors.
     - a. Cost $8,600
  2. Alternatives to B1
     - a. Move language lab to accessible area. Cost
     - b. Make arrangements for handicapped persons to make use of these facilities in another area. Cost
     - c. Make another quiet area in an accessible location, preferably on first floor. Cost
     - d. Student government must make arrangements or adaptation for the handicapped to be involved with student government. Cost
  3. Install 3" high ramp at southeast entrance doorway to Main Classroom Building. Access directly to switchboard and designated restrooms.
     - a. Cost $300

VIII. Elevators

- A. Main Classroom Building
  1. Install new lightweight door on key operated elevator
  2. Cost $4,800

IX. Transportation waivers and/or expenses

A. Assist in payment of transportation costs to needy handicapped persons. Estimated 20% of total handicapped will qualify for the waiver.
B. Cost $150 per academic year

X. Elevator panel buttons are inaccessible to many handicapped persons.

A. Install raised button on elevator panel
B. Cost $25

XI. Cost Summary:

UCCS general overall transportation waivers and/or expenses	$ 150
Building Priority #1	17,125
Building Priority #2	975
Building Priority #3	200
TOTAL	$18,450

Submitted by,

Michael P. Sanchez

Michael P. Sanchez, Chairperson
UCCS Committee on Elimination of Architectural
Barriers to the Handicapped

MPS/lm

BUILDING: Main Classroom Building ; Priority #1

Constructed: 1901

Area, sq. ft.: 25,671

Rooms: 22

Activity Stations: Student Lounge on 2nd floor; quiet lounge on 3rd floor.

Principal Tenant: Student Relations
Admissions & Records

Functional Use: Academic, administrative services

Restrooms: two women's
two men's

Elevators: One elevator stopping at all floors.

SURVEY RESULTS:

(1) Neither the men's nor the women's restrooms conform to handicap standards.

(2) First floor fountain is not accessible.

(3) There is a three-inch step hindering accessibility at main entrance to southwest entrance.

(4) Elevators at present are too heavy for use by the handicapped.

(5) The elevated landing on the third floor hinders accessibility.

(6) There is no reserved parking area.

RECOMMENDATIONS:

(1) Both men's and women's restrooms necessitate installation of one stall which conforms to standards ($3,000); besides a lighter door in the women's restroom ($200).

(2) Install bubbler on the first floor ($175).

(3) Install three-inch high ramp at southeast entrance doorway to Main Classroom Building ($300).

(4) Install new light-weight door on key operated elevator ($ 4800)

(5) Install ramp on the third floor ($8600).

(6) Sectioning parking allocations for handicapped at west entrance to building ($50).

SUBTOTAL: $17,125

BUILDING; Dwire Auditorium and Library ; Priority #2

Constructed: 1971

Area, sq. ft.: 50,359

Rooms: 95

Activity Stations: Library, Laboratory Classrooms

Principal Tenant: Library, Offices

Functional Use: Library, Academic, Laboratories

Restrooms: three women's
three men's

Elevators: one

SURVEY RESULTS:

(1) Men's and women's restrooms need modifications.

(2) Inaccessible drinking fountain.

(3) Auditorium---no accessible seating area for handicapped.

(4) Step hinders accessibility to second floor patio.

(5) No reserved parking area.

(6) Buttons on elevator pannel are recessed.

RECOMMENDATIONS:

(1) Install lower mirrors, towel dispensers, shelves, insulate pipes in restrooms. ($400).

(2) Install cup dispenser ($50).

(3) Remove two (2) permanent seats ($50)

(4). Install ramp to second floor patio ($400)

(5) Sectioning parking allocations at rear entrance to Dwire Auditorium ($50).

(6) Install raised buttons on elevator panel ($25).

SUBTOTAL: $975

BUILDING; Manor Building ; Priority #3

Constructed: 1958 Area, sq. ft.: 15,900

Rooms: 36 Activity Stations: Bookstore

Principal Tenant: Administrative Offices

Functional Use: Offices, Bookstore

Restrooms: two public Elevators: one, automatic

SURVEY RESULTS:

(1) Recessed water fountain

(2) No access onto sidewalk at south entrance

(3) No reserved parking areas

RECOMMENDATIONS:

(1) Install cup dispenser on the first floor ($50)

(2) Cut curb at south entrance ($100)

(3) Section parking areas for handicapped at south entrance ($50)

SUBTOTAL: $200

Summary of Costs:

UCCS general overall transportation waivers and/or expenses	$150
Building Priority #1	$17,125
Building Priority #2	$975
Building Priority #3	$200
TOTAL:	$18,450

UNIVERSITY OF COLORADO - DENVER

Most of the architectural barriers of the University of Colorado - Denver, campus have either been removed or will be eliminated when the new Auraria campus is occupied.

However, there are several minor modifications that are necessary in the three buildings which will continue to serve educational purposes. These are minor modifications and consequently detailed survey forms have not been completed.

A summary of remaining barriers and costs to remove them, is as follows:

Classroom Building (Lower mirrors & telephone)	$ 220
Library Building (Restroom modifications)	1760
Tower Building (Restroom modifications)	2750
Contingency	710
Total Recommendation	$5440

COLORADO COMMISSION ON HIGHER EDUCATION
Elimination of Architectural Barriers
Initial Survey

Please complete this survey form, retain a copy for your files, and return the original to: Dr. Jerome F. Wartgow, Assistant Director, Colorado Commission on Higher Education, 719 State Services Building, Denver, Colorado 80203.

The survey should be received by CCHE prior to the "Workshop on Elimination of Architectural Barriers," scheduled for March 11, 1974.

I. Name of Institution University of Colorado at Denver

II. Chairman of Committee on Architectural Barriers Robert L. Perkin
(or person completing this form)

III. Telephone 573-6964

IV. Estimated Number in each of the following categories currently at the institution:

	Students	Faculty and Staff
(a) Wheelchair Disabilities	45	0
(b) Ambulatory Disabilities (i.e. post polio, cerebial palsy, temporary ski injuries, etc.)	about 75	1
(c) Blindness	2	0
(d) Deafness	Unknown	0)
(e) Cardiac Problems	Unknown	0
Total	123	1

V. Please list any programs offered by your institution that, to the best of your knowledge, are unique within the system of Public Higher Education in the State of Colorado. (i.e., B.S.-Veterinary Science; Ph.D.-Nursing; A.A.-Blacksmithing; etc.)

Community Design Center, Center for Urban Transportation Studies. Urban Design Program, Urban and Regional Planning-Community Development Program, Division of Public Administration, Division of Urban Affairs. Population Dynamics Program.

CCHE 2/74

UNIVERSITY OF COLORADO - MEDICAL CENTER

The following is a summary of the recommendations made for the University of Colorado Medical Center. The Psychiatric Hospital is excluded due to possible demolition. Only a ramp into the bookstore of the Office Annex Building is recommended at this time as this building is quite old and may be demolished in the future. These renovations will make the campus sufficiently accessible to the handicapped members of the campus. It will also be accessible for its wide community use.

Medical School Building	
Curb Cuts and Ramps	
North side to CGH - cut	$ 150
South side to Parking Lots - ramps (2)	200
Restroom modification (2)	4200
Lower drinking fountains (4)	720
Denison Library Building	
Lower drinking fountain	180
Office Annex Building	
Ramp and door - South entrance to bookstore	3000
Colorado General Hospital	
Restroom modification (2) (will involve tile and replumbing in excess of average job)	5000
Lower drinking fountains (2)	360
Lower pay phone	125
TOTAL	$13,935

COLORADO SCHOOL OF MINES

The Colorado School of Mines offers programs which are unique in Colorado, while at the same time are attractive to students with physical disabilities. However, the natural terrain of the campus, combined with the inherent design of many of the older buildings on campus, make renovation for total accessibility both architecturally and economically infeasible.

If the following recommendations are implemented, those areas of the campus which receive the greatest amount of student and community use will be accessible, and although the situation will not be ideal, it will be possible for handicapped persons to take advantage of the School of Mines educational program.

Meyer Hall	$ 6,600
Guggenheim	5,800
Geology	6,780
Coolbaugh	43,675
Gymnasium	6,325
Library	3,980
N. P. Hall	3,750
Green Center	755
Alderson Hall	6,550
Total Recommendation	$80,840

COLORADO COMMISSION ON HIGHER EDUCATION
Elimination of Architectural Barriers
Initial Survey

Please complete this survey form, retain a copy for your files, and return the original to: Dr. Jerome F. Wartgow, Assistant Director, Colorado Commission on Higher Education, 719 State Services Building, Denver, Colorado 80203.

The survey should be received by CCHE prior to the "Workshop on Elimination of Architectural Barriers," scheduled for March 11, 1974.

I. Name of Institution Colorado School of Mines
II. Chairman of Committee on Architectural Barriers (or person completing this form) L. David Femmer, Acting Chairman
III. Telephone 303-279-3381, X 213
IV. Estimated Number in each of the following categories currently at the institution:

	Students	Faculty and Staff
(a) Wheelchair Disabilities	0	1
(b) Ambulatory Disabilities (i.e. post polio, cerebial palsy, temporary ski injuries, etc.)	0	0
(c) Blindness	0	0
(d) Deafness	0	0
(e) Cardiac Problems	0	2
Total -	0	3

V. Please list any programs offered by your institution that, to the best of your knowledge, are unique within the system of Public Higher Education in the State of Colorado. (i.e., B.S.-Veterinary Science; Ph.D.-Nursing; A.A.-Blacksmithing; etc.)

CCHE 2/74

INSTITUTION: Colorado School of Mines

BUILDING: Meyer Hall

PRINCIPAL TENANT: Physics Department

FUNTIONAL USE: Classrooms and labs

SURVEY RESULTS:

A rise of steps 36 in. is at the entrance and no toilet facilities are present to handle the handicapped.

RECOMMENDATIONS:

		JOB $
1.	Ramp 36 in. rise at entrance	$3,600
2.	Adapt restrooms (2) M&W (adapt less sinks and urinals)	$3,000
	TOTAL:	$6,600

INSTITUTION: Colorado School of Mines

BUILDING: Guggenheim

PRINCIPAL TENANT: Administration Offices

FUNTIONAL USE: Offices

SURVEY RESULTS:

Curb cuts and parking are required and there are a series of steps leading down to the entrance 26 in. There are no toilet facilities for the handicapped.

RECOMMENDATIONS:		JOB $
1.	Provide curb cut and parking	$150
2.	Ramp down to entrance 26 in.	$2,600
3.	Adapt restrooms (2) M&W (adapt less sinks and urinals)	$3,000
4.	Install cup dispenser at water fountain	$50
	TOTAL:	$5,800

INSTITUTION: Colorado School of Mines

BUILDING: Geology

PRINCIPAL TENANT: Museum

FUNTIONAL USE: Classroom and museum also labs.

SURVEY RESULTS:

Rise of steps at entrance 36in. Inadequate toilet facilities in building.

RECOMMENDATIONS:

	JOB $
1. Ramp 36 in. rise of steps	$3,600
2. Adapt toilet facilities (2) M&W (adapt less sinks and urinals)	$3,000
3. Lower fountain	$180
TOTAL:	$6,780

INSTITUTION: Colorado School of Mines

BUILDING: Coolbaugh Hall

PRINCIPAL TENANT: Chemestry Department

FUNTIONAL USE: Classrooms and labs.

SURVEY RESULTS:

There is a series of step leading to the entrance and no vertical transportation in the building. The restrooms are inadequate.

RECOMMENDATIONS:

		JOB $
1.	Ramp 25 in. rise to entrance	$2,500
2.	Provide vertical transportation	$38,000
3.	Curb cut to building	$125
4.	Adapt toilet facilities	$3,000
5.	Install cup dispenser at fountain	$50
	TOTAL:	$43,675

INSTITUTION: Colorado School of Mines

BUILDING: Gymnasium

PRINCIPAL TENANT: P.E. Department

FUNTIONAL USE: Recreation

SURVEY RESULTS:

Parking and a curb cut need to be provided. There is a series of steps 30 in. at entrance and no toilet facilities available to the handicapped.

RECOMMENDATIONS:

		JOB $
1.	Install curb cut and parking	$150
2.	Ramp 30 in, rise at entrance	$3,000
3.	Install cup dispenser at water fountain	$50
4.	Lower public telephone	$125
5.	Adapt restroom facilities (2) M&W	$3,000
	TOTAL:	$6,325

INSTITUTION: Colorado School of Mines

BUILDING: Library

PRINCIPAL TENANT: Learning resource center

FUNTIONAL USE: Library

SURVEY RESULTS:

Entrance has no ahndrail and the back entrance for wheelchairs is blocked by two 3 in. steps. There are no adequate toilet facilities and no parking spaces.

RECOMMENDATIONS:

		JOB $
1.	Provide parking space	$50
2.	Install 30 ft. of handrail at main entrance.	$480
3.	~~Ramp two 3 in. steps at back entrance~~	~~$400~~
4.	Install cup dispenser at fountain	$50
5.	Adapt restrooms (2) M&W (adapt less sinks and urinals)	$3,000
	TOTAL:	$3,980

INSTITUTION: Colorado School of Mines

BUILDING: N.P. Hall

PRINCIPAL TENANT: Metalurgy

FUNTIONAL USE: classrooms and labs

SURVEY RESULTS:

A 7 in. step exists at entrance and there are no toilet facilities for the handicapped.

RECOMMENDATIONS:

		JOB $
1.	Ramp 7 in. step	$700
2.	Install cup dispenser at fountain	$50
3.	Adapt toilet facilities. (2) M&W	$3,000
	TOTAL:	$3,750

INSTITUTION: Colorado School of Mines

BUILDING: Green Center

PPINCIPAL TENANT: Computer Center - future center (temporarily) forUSGS.

FUNTIONAL USE: Auditorium, classrooms and general purpose.

SURVEY RESULTS:

The building lacks parking and needs a curb cut. The restrooms require minor adaptations and the elevator is not marked for the blind.

RECOMMENDATIONS:

		JOB $
1.	Provide parking and curb cut	$150
2.	Lower public telephone	$125
3.	Install cup dispenser at fountain	$50
4.	Mark the elevator for the blind	$5
5.	Adapt restrooms (2) M&W (mirror, insulation, towel disp, etc)	$400
	TOTAL:	$755

INSTITUTION: Colorado School of Mines

BUILDING: Alderson Hall

PRINCIPAL TENANT: Humanities department

FUNTIONAL USE: Classrooms

SURVEY RESULTS:

Access can be obtained into the building through the loading dock but a ris of 35 in. will have to be ramped. There are no toilet facilities for the handicapped.

RECOMMENDATIONS.

		JOB $
1.	Ramp to loading dock 35 in.	$3,500
2.	Adapt toilet facilities (2) M&W	$3,000
3.	Install cup dispenser at fountain	$50
	TOTAL:	$6,550

UNIVERSITY OF NORTHERN COLORADO

The University of Northern Colorado located in Greeley, Colorado, is a major university with large numbers of handicapped students enrolled and with strong programs in areas dealing with the handicapped. A very active Handicapped Students Association with a national reputation used a $10,000 1974 appropriation from the Legislature to complete program planning for removal of barriers over the entire campus.

Recommendations are listed below.

Kepner Hall	$ 99,423	
Frasier Hall	82,986	
Crabbe Hall	88,672	
Guggenheim Hall	91,230	
Michener Library	3,118	
McKee Hall of Education	9,734	
Ross Hall of Science	20,358	
Arts Annex	76,294	
Gunter Hall	12,764	
Decker Hall	6,562	
Bishop Lehr Lab School	4,760	
Carter Hall	6,193	
Candelaria Hall	807	
Gray Hall	22,784	
Roudebush Hall	821	
Gordon Hall	3,653	
University Hall	3,626	
Walkways and Grounds	3,300	
Miscellaneous	66,105	
20% for Professional fees, Management and Contingencies		120,638
Estimated Cost - October, 1974		723,828
1975 (add 15% inflation to October '74 cost)		832,402
1976 (add 15% inflation)		957,262
TOTAL	$957,262	

Capital Construction Request 1975-76

$ 832,402

[October, 1974 Estimated Cost plus 15% Inflation Factor]

Estimated cost - October, 1974	$723,828
1975 (add 15% inflation to October '74 cost)	$832,402
1976 (add 15% inflation)	$957,262

The following facilities are listed in the order of their priority for remodeling to satisfy standards for accessibility to the disabled.

A more detailed breakdown of the estimated costs for the remodeling of these facilities may be found on the following pages.

ACADEMIC-ADMINISTRATIVE BLDGS.	---	$533,785
KEPNER HALL	$ 99,423	
FRASIER HALL	$ 82,986	
CRABBE HALL	$ 88,672	
GUGGENHEIM HALL	$ 91,230	
MICHENER LIBRARY	$ 3,118	
McKEE HALL OF EDUCATION	$ 9,734	
ROSS HALL OF SCIENCE	$ 20,358	
ARTS ANNEX	$ 76,294	
GUNTER HALL	$ 12,764	
DECKER HALL	$ 6,562	
BISHOP LEHR LAB SCHOOL	$ 4,760	
CARTER HALL	$ 6,193	
CANDELARIA HALL	$ 807	
GRAY HALL	$ 22,784	
ROUDEBUSH HALL	$ 821	
GORDON HALL	$ 3,653	
UNIVERSITY HALL	$ 3,626	

WALKWAYS & GROUNDS	$ 3,300	$ 3,300

MISCELLANEOUS	$ 66,105	$ 66,105

20% for Professional Fees, Management and Contingencies	---	$120,638

The University of Northern Colorado has been involved in an on-going Project for the Removal of Architectural Barriers to the Disabled since early 1971. By June, 1972, the Architectural Barriers on Campus (ABC) Committee was organized as a Standing Committee, with the purpose of surveying and evaluating the facilities at the University, in an effort to identify architectural barriers to the disabled, and to make recommendations for their correction.

Although the ABC Committee has accomplished a great deal in actually eliminating many minor barriers over the last two years, perhaps its most important accomplishement was pointing out the scope of that work which remains to be done. Realizing that this work was beyond the financial resources of the ABC Committee, as well as the University's operating budget, the University Administration took steps to submit a Capital Construction Request for 1974-75 for Funds For the Removal of Architectural Barriers. A report prepared by the ABC Committee, which identified barriers and recommended procedures for their removal, was to provide data to justify this request.

Architectural Barriers on the campus of the University of Northern Colorado are especially discouraging. The University, through its undergraduate and graduate School of Special Education and Rehabilitation, has identified and outlined for itself a special mission which recognizes the necessity of and special difficulties in educating the disabled. The Special Education component of the University Laboratory School provides an environment for observation and student teaching, in which children are enrolled who may be physically, visually or acoustically handicapped; as well as those who may be mentally retarded, emotionally disturbed, or with special learning difficulties.

In the past, physically and mentally disabled people were taught and confined in their homes and in special and costly institutions, schools, and classrooms. Now, however, the University's own School of Special Education teaches that the inhumane and expensive practice of treating the disabled as an isolated group requiring an isolated environment must end, and that society, as well as the disabled individual, is best served when the disabled are allowed to learn and function in a normal environment.

With the University itself teaching these views, it is unacceptable that disabled students who attend the University of Northern Colorado are limited to major and minor programs which are taught on the Darrell Holmes Campus only; they are denied education in such areas as the Fine Arts, Home Economics, and Business, because the buildings in which these departments are housed are inaccessible. Many severely disabled students at the University cannot even meet the University's general education requirements, due to the architectural barriers of the buildings in which many of these classes are taught; they take general education requirement courses at a junior college, and then transfer to the University to complete their degree programs. In fact, many of the severely disabled students at the University of Northern Colorado are in graduate programs, in which the program requirements are more flexible, allowing the students to develop course schedules which avoid inaccessible buildings.

While some authorities assert that as many as 25% of the population may be considered disabled as the result of cardiac difficulties, arthritic inconvenience, myopia, etc., the following figures describing the disabled population at the University of Northern Colorado are limited only to those people to whom architectural barriers constitute an immediate and serious obstacle. It is expected that next year these figures will be even greater.

	Students	Staff
Orthopaedic disabilities confined to wheelchairs	14	2
Ambulatory orthopaedic disabilities	30	15
Visually handicapped	16-20	2
Hearing disabilities	10	1

In addition to the population described by these figures, approximately 150 disabled children are enrolled in the Special Education Laboratory School.

Estimating construction costs is always a difficult procedure. It must take into account many variables which are not always clearly defined, and whose impact on final costs are not always easy to determine. The difficulty of cost estimating is compounded when the work being estimated involves remodeling rather than new construction, as the number and magnitude of variables is usually increased.

The following discussion describes how costs were determined for this project, and which variables and uncertainties might develop during the course of construction, thereby contributing to the final cost.

The BASE COST was determined to be the cost of labor and materials to eliminate specific existing architectural barriers in October, 1974, if this work was to be new construction. All of the buildings on the campus which are inaccessible to the disabled have similar barriers. However, the scope of these barriers may vary from building to building, and this variation is reflected in the costs of renovating similar items in different buildings, as described by the BASE COST.

A RISK FACTOR of either 20% or 30% of the Base Cost has been added to the total Estimated Cost, because the elimination of the architectural barriers on the campus is remodeling work. The variable elements which greatly contribute to the increased costs of remodeling as opposed to new construction may include any or all of the following, most of which normally are not encountered in new construction:

DEMOLITION: Removing existing construction to allow for new construction; removing demolition debris from the construction site.

REMODELING EXISTING CONSTRUCTION: Remodeling existing construction so as to accomodate new construction.

WORKING IN OCCUPIED AREAS: Involved inefficiencies encountered as the result of having to avoid other activities within the same space; having to co-ordinate construction efforts with other unrelated, on-going activities.

ADDITIONAL SAFETY REQUIREMENTS: Increased care and additional barriers necessary because construction is in occupied areas.

DELIVERY INEFFICIENCY: Deliveries may be inefficient because construction is spread over a large area; large amounts of materials may not be able to be stockpiled because of a lack of storage facility.

CLEAN-UP: Because work is being carried out in occupied areas, workmen will have to be neater, and may have to clean up the site more thoroughly each night than otherwise would be necessary.

UNFORSEEN CIRCUMSTANCES: Structural difficulties may develop during construction which may not have been apparant during the design phases.

The RISK FACTOR is determined to be 20% for exterior construction, and 30% for interior construction. The 10% difference takes into account the fewer difficulties which may arise during exterior construction.

The factor of 17% allowed for PROFIT AND OVERHEAD takes into account the greater costs to the contractor in undertaking a number of small projects than a single large project. For example: A painter must take nearly as much time to arrange his

his equipment to paint 100 square feet of wall as he needs to arrange his equipment to paint an entire building. The costs of set-up and take-down are therefore multiplied, although the amount of paint actually applied may be much smaller. Similarly, the office costs to the contractor in managing a large number of small projects as opposed to a single, larger one are greater.

These factors for OVERHEAD AND PROFIT and RISK are added to the BASE COST to determine the ESTIMATED COST-OCTOBER, 1974. This figure, however, is based upon estimated costs for construction in October, 1974. Since it is impossible for construction to begin before 1975, an Inflation Factor of 15% has been added to the ESTIMATED COST - OCTOBER, 1974. The actual amount requested for Capital Construction is this ESTIMATED COST - OCTOBER, 1974 adjusted by the 15% Inflation Factor.

ARTS ANNEX

Date of building completion: 1932
Remodeled: 1963

This three-story building was originally the old boiler house, but was remodeled in 1963 to accomodate the Industrial Arts.

Estimated cost - October, 1974	$ 76,294
1975 (add 15% inflation to October '74 cost)	$ 87,738
1976 (add 15% inflation)	$ 100,899

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		$ 920	$ 184		$ 166	$1,292
entry ramps	$ 345					
blacktop walk	$ 575					

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
INTERIOR CONSTRUCT'N		$9,292		$2,780	$2,054	$14,162
ramps	-----					
stairs	$ 345					
restrooms	$1250					
water fountains	$ 863					
public telephones	-----					
brailling	$ 49					
wheelchair lifts	$6210					
adapt work areas	$ 575					

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
elevators	$40,000	$40,000	---	$12,000	$8,840	$60,840

BISHOP LEHR LAB SCHOOL

Date of Building Completion: 1961
Remodeling: none

This building houses the Offices of the Dean of Special Education, the Special Education Laboratory School for physically handicapped, mentally retarded, and emotionally disturbed children; the Audiology Clinic; Speech Therapy; the Laboratory High School; and KUNC-TV Lab.

Estimated cost - October, 1974	$ 4,760
1975 (add 15% inflation to October '74 cost)	$ 5,474
1976 (add 15% inflation)	$ 6,295

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		$ 81	$ 16		$ 16	$ 113
entry ramps	---					
curb cut	$ 81					

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
INTERIOR CONSTRUCT'N		$ 3,310		$ 662	$ 675	$ 4,647
ramps	---					
stairs	$ 230					
restrooms	$2,500					
water fountains	$ 290					
public telephones	---					
brailling	$ 150					
door grab bars	$ 140					

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
elevators	---	---	---	---	---	---

CANDELARIA HALL

Date of building completion: 1973
Remodeling: none

This building houses general classroom space; the Departments of Sociology, Geography, Political Science, Communications & Speech, Language, Black Studies, Anthropology; laboratories; a museum; and special storage for artifacts.

Estimated cost - October, 1974	$ 807
1975 (add 15% inflation to October '74 cost)	$ 928
1976 (add 15% inflation)	$ 1,067

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		$ 575	$ 115		$ 117	$ 807
entry ramps	---					
parking lot	$ 575					
INTERIOR CONSTRUCT'N		---		---	---	---
ramps	---					
stairs	---					
restrooms	---					
water fountains	---					
public telephones	---					
brailling	---					
elevators	---	---	---	---	---	---

CARTER HALL

Date of building completion: 1906
Addition: 1937
Additional work: 1966, airconditioning installed and stack area increased.

Carter Hall, a three-level building, houses Admissions, the Placement Center; the Music Library; KUNC Radio, and a small performing threater.

Estimated cost - October, 1974	$ 6,193
1975 (add 15% inflation to October '74 cost)	$ 7,122
1976 (add 15% inflation)	$ 8,190

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		$ 920	$ 184		$ 186	$ 1,292
entry ramps	$ 920					
INTERIOR CONSTRUCT'N		$ 3,222		$ 967	$ 712	$4,901
ramps	---					
stairs	---					
restrooms	$2,500					
water fountains	$ 575					
public telephones	---					
brailling	$ 32					
study carrels	$ 115					
elevators	---	---	---	---	---	---

CRABBE HALL

Date of building completion: 1919
Remodeling: none

This building houses the Home Economics Department, which is divided into three areas. The lower level of the building accomodates the Textile Lab; the first level contains the kitchens and dining rooms; the second level contains the sewing equipment. All of the facilities are suitable for teaching living skills to the disabled.

Estimated cost - October, 1974	$ 86,672
1975 (add 15% inflation to October '74 cost)	$101,973
1976 (add 15% inflation)	$117,269

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		$14,950	$ 2,990		$ 3,050	$20,990
entry ramps	$14,950					

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
INTERIOR CONSTRUCT'N		$4,498		$1,350	$ 994	$6,842
ramps	---					
stairs	$ 518					
restrooms	$1,875					
water fountains	$ 860					
public telephones	---					
brailling	$ 60					
adapt kitchen	$1,185					

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
elevators	$40,000	$40,000	---	$12,000	$8,840	$60,840

DECKER HALL

Date of building completion: 1921
Remodeled: none

Decker Hall houses the Student Health Services.

Estimated cost - October, 1974	$6,562
1975 (add 15% inflation to October '74 cost)	$7,546
1976 (add 15% inflation)	$8,678

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		$690	$138		$141	$969
entry ramps	$575					
handrails	$115					

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
INTERIOR CONSTRUCT'N		$3,677		$1,103	$813	$5,593
ramps	---					
stairs	$ 115					
restrooms	$1,250					
water fountains	---					
public telephones	---					
brailling	$ 12					
widen hall	$2,300					

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
elevators	---	---	---	---	---	---

FRASIER HALL

Date of building completion: 1954
Remodeling: none

Frasier Hall houses the Music Department in the north wing, and Administrative Offices in the south wing. The center of the building accomodates the Little Theater of the Rockies.

Estimated cost - October, 1974	$82,986
1975 (add 15% inflation to October '74 cost)	$95,434
1976 (add 15% inflation)	$109,749

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		$7,475	$1,495		$1,525	$10,495
entry ramps	$7,475					
INTERIOR CONSTRUCT'N		$7,660		$2,298	$1,693	$11,651
ramps	---					
stairs	$ 700					
restrooms	$5,000					
water fountains	$1,150					
public telephones	$ 60					
brailling	$ 150					
adapt theater	$ 600					
elevators	$40,000	$40,000	---	$12,000	$8,840	$60,840

GORDON HALL

Gordon Hall houses administrative offices.

Estimated cost - October, 1974	$3,653
1975 (add 15% inflation to October '74 cost)	$4,200
1976 (add 15% inflation)	$4,830

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		$920	$184		$188	$1,292
entry ramps	$920					
INTERIOR CONSTRUCT'N		$1,552		$466	$343	$2,361
ramps	---					
stairs	---					
restrooms	$1,250					
water fountains	$ 290					
public telephones	$---					
brailling	$ 12					
elevators	---	---	---	---	---	---

GUGGENHEIM HALL

Date of building completion: 1912
Remodeled: Partly destroyed by fire in 1951; restored to original state.

Guggenheim Hall houses the Fine Arts Department, including sculpture, painting and pottery studios, a small gallery, and administrative offices.

Estimated cost - October, 1974	$91,230
1975 (add 15% inflation to October '74 cost)	$104,915
1976 (add 15% inflation)	$120,652

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		$14,950	$2,990		$3,050	$20,990
entry ramps	$14,950					
INTERIOR CONSTRUCT'N		$6,180		$1,854	$1,366	$9,400
ramps	$3,100					
stairs	$ 345					
restrooms	$1,250					
water fountains	$ 860					
public telephones	---					
brailling	$ 50					
adapt work areas	$ 575					
elevators	$40,000	$40,000	---	$12,000	$8,840	$60,840

GRAY HALL

Date of building completion: East section in 1915; middle section in 1938; and west section in 1940.
Remodeled: 1951-1952, offices rearranged.

Gray Hall houses the Counseling and Testing Center, where students can take advantage of personal counseling, group sessions, vocational counseling, etc. Also housed in this building are the gymnastics rooms.

Estimated cost - October, 1974	$22,784
1975 (add 15% inflation to October '74 cost)	$26,202
1976 (add 15% inflation)	$30,132

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		$10,410	$2,082		$2,124	$14,616
entry ramps	$9,775					
pave walk	$ 550					
curb cut	$ 85					
INTERIOR CONSTRUCT'N		5,370		$1,611	$1,187	$8,168
ramps	$2,300					
stairs	$ 350					
restrooms	$2,050					
water fountains	$ 575					
public telephones	$ 60					
brailling	$ 35					
elevators	---	---	---	---	---	---

GUNTER HALL

Date of building completion: 1927
Refurbished: the viewing stands were rebuilt in 1958
Remodeled: 1961, men's locker rooms; swimming pool reconditioned and women's locker rooms from 1965 to 1969.

Gunter Hall presently houses Physical Education, intramural sports, recreation and Gerontology classes. When the new HPER building is ready for use, the disabled will likely have more use of these facilities, as all tournaments, matches, and competitions will move to the new facility.

Estimated cost - October, 1974	$12,764
1975 (add 15% inflation to October '74 cost)	$14,679
1976 (add 15% inflation)	$16,880

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		$1,150	$230		$235	$1,615
entry ramps	$1,150					

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
INTERIOR CONSTRUCT'N		$7,330		$2,199	$1,620	$11,149
ramps	---					
stairs	$ 230					
restrooms	$2,000					
water fountains	$ 290					
public telephones	$ 60					
brailling	$ 50					
wheelchair lift	$3,100					
pool lift	$ 800					
showers	$ 800					

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
elevators	---	---	---	---	---	---

KEPNER HALL

Date of building completion: 1912, center section; 1923, west wing; 1924 east wing.
Renovated: 1943 and 1948
Remodeled: 1964 when changed from Laboratory School to University facilities.

Kepner Hall now houses the School of Business and general classrooms.

The remodeling of Kepner Hall to satisfy standards to accomodate the disabled is the highest priority.

Estimated cost - October, 1974	$99,423
1975 (add 15% inflation to October '74 cost)	$114,336
1976 (add 15% inflation)	$131,486

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		$22,660	$4,532		$4,623	$31,815
entry ramps	$22,500					
curb cuts	$ 160					
INTERIOR CONSTRUCT'N		$4,450		$1,335	$983	$6,768
ramps	---					
stairs	$ 520					
restrooms	$3,000					
water fountains	$ 865					
public telephones	---					
brailling	$ 65					
elevators	$40,000	$40,000	---	$12,000	$8,840	$60,840

McKEE HALL OF EDUCATION

Date of building completion: 1969

McKee Hall houses classrooms and offices for the departments of Education, Psychology, Material Media Center, and a lecture room.

Estimated cost - October, 1974	$ 9,734
1975 (add 15% inflation to October '74 cost)	$11,194
1976 (add 15% inflation)	$12,873

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		---	---		---	---
entry ramps	---					
INTERIOR CONSTRUCT'N		$6,400		$1,920	$1,114	$9,734
ramps	---					
stairs	$ 400					
restrooms	$4,500					
water fountains	$1,150					
public telephones	---					
brailling	$ 150					
adapt lecture pit	$ 200					
elevators	---	---	---	---	---	---

MICHENER LIBRARY

Date of Building completion: 1971
Remodeling: none

Michener Library houses the School of Arts and Sciences, Rehabilitation, Economics, Health Education, the Media Center, a small auditorium, and general classrooms, as well as the major portion of the University's collection of books and research materials.

Estimated cost - October, 1974	$3,118
1975 (add 15% inflation to October '74 cost)	$3,586
1976 (add 15% inflation)	$4,123

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		---	---		---	---
entry ramps	---					
INTERIOR CONSTRUCT'N		$2,050		$615	$453	$3,118
ramps	---					
stairs	---					
restrooms	$1,250					
water fountains	$ 575					
public telephones	---					
brailling	$ 225					
elevators	---	---	---	---	---	---

ROSS HALL OF SCIENCE

Date of building completion: 1964
Remodeling: none

Ross Hall houses the Sciences and Mathematics. It is a three-story building with a basement, and a lecture pit connected by a tunnel to the basement floor.

Ross Hall has a freight elevator which can be used to accomodate the disabled.

Estimated cost - October, 1974	$ 20,358
1975 (add 15% inflation to October '74 cost)	$ 23,412
1976 (add 15% inflation)	$ 26,924

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		$7,935	$1,587		$1,619	$11,141
entry ramps	$7,935					
INTERIOR CONSTRUCT'N		$6,060		$1,818	$1,339	$9,217
ramps	---					
stairs	$1,345					
restrooms	$3,650					
water fountains	---					
public telephones	---					
brailling	$ 190					
adapt labs	$ 875					
elevators	---	---	---	---	---	---

UNIVERSITY HALL

Date of building completion: purchased by UNC in 1963 and moved to campus.
Remodeling: 1963

University Hall houses the School of Nursing, and at present is rather remote from the rest of the campus.

Estimated cost - October, 1974	$3,626
1975 (add 15% inflation to October '74 cost)	$4,169
1976 (add 15% inflation)	$4,794

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		$920	$184		$156	$1,260
entry ramps	$920					

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
INTERIOR CONSTRUCT'N		$1,555		$467	$344	$2,366
ramps	---					
stairs	---					
restrooms	$1,250					
water fountains	$ 290					
public telephones	---					
brailling	$ 15					

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
elevators	---	---	---	---	---	---

ROUDEBUSH HALL

Date of Building completion: 1915

Radabush Hall was originally the "home practice cottage" for the Department of Home Economics. Today it is used as office space for faculty and staff of the Art Department.

Estimated cost - October, 1974	$ 821
1975 (add 15% inflation to October '74 cost)	$ 944
1976 (add 15% inflation)	$1,085

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		$575	$115		$117	$807
entry ramps	$575					
INTERIOR CONSTRUCT'N		$9		$3	$2	$14
ramps	---					
stairs	---					
restrooms	---					
water fountains	---					
public telephones	---					
brailling	$9					
elevators	---	---	---	---	---	---

MISCELLANEOUS

Estimated cost - October, 1974	$ 66,105
1975 (add 15% inflation to October '74 cost)	$ 76,020
1976 (add 15% inflation)	$ 87,420

	BASE COST	SUB TOTAL	RISK 20%	RISK 30%	PROFIT 17%	TOTAL COST
EXTERIOR CONSTRUCT'N		$3,750	$ 750		$765	$5,265
ramp at Jackson field	$ 750					
hydraulic lift on campus bus	$3,000					
INTERIOR CONSTRUCT'N		$40,000		$12,000	$8,840	$60,840
electric doors into Michener	$10,000					
electric doors into U.Center	$20,000					
electric doors into HPER Bldg	10,000					
elevators	---	---	---	---	---	---

COLORADO STATE UNIVERSITY

Colorado State University offers numerous programs that are unique within Colorado, and that are top priorities for accessibility to the handicapped. In addition, Colorado State University has a history of strong commitment to meeting the needs of the physically handicapped and has traditionally served several hundred students with permanent disabilities each year.

An extensive study has been completed and a detailed program plan for removal of architectural barriers is on file with CCHE. In the interest of keeping this program plan to a reasonable size, only a portion of the Colorado State University documentation of need is included here. The entire study will be made available upon request.

The CCHE study has determined that Colorado State University is a top priority for removal of architectural barriers, and recommends funding of the project as outlined in the summary budget which follows. Due to the magnitude of the project, phased funding may be a reasonable way to approved elimination of the barriers. However, the effects of escalation can be expected to significantly increase the cost of the project, and therefore the first priority CCHE recommendation is for full funding for FY 1975-76.

SUMMARY

BUILDING	NO. OF ROOMS	ACTIVITY STATIONS	UNIT COST	BUILDING COST
Student Services*	75	140		$ 64,190**
Administration Annex*	42	145		148,190
Johnson Hall	59	827		9,145
Plant Sciences*	106	807		77,875
New Chemistry	96	1,027		20,995
Engineering Complex				133,370
Arcade	42	369	$ 5,290	
B Wing*	35	372	82,195	
E Wing*	63	468	45,885	
Social Sciences*	441	4,124		83,235
Humanities*		329		56,170
Morgan Library	2,000 reader sta./1,000,000 books			11,995
Physiology	38	366		22,570
Aylesworth Hall	90	557		6,415
Old Forestry		367		6,940
Veterinary Medicine*		626		61,065
Student Center				38,595
Auditorium-Gymnasium				3,625
Hughes Stadium				5,520
Aggie Village I		2 Units @ $3,650		7,300
Parmelee Hall		2 Units @ $8,665		17,330
TOTAL (Based on June, 1974 prices including design and contingencies)				$774,495
FY 1975-76 REQUEST IN THE AMOUNT OF				$991,354

Escalated as per the "Program Plan for Building Construction Costs Escalation for Projects at Colorado State University for FY 1975-76 Capital Construction Budget Requests"

*Elevator Required

**In the event the entire project as set forth in the program plan is not funded in total, Colorado State University would restructure the priorities contingent upon funds made available.

HISTORY OF THE PROJECT AT COLORADO STATE UNIVERSITY

In 1969, at the request of the President of Colorado State University, an ad hoc committee was formed to assess the needs of the handicapped at Colorado State University. The committee was composed of representatives from:

Academic Advising
Administration
Admissions and Records
Housing
Physical Plant
Social Work
Student Health

This committee reports directly to the President.

Early activities of the committee consisted of conducting a survey of the major physical facilities on the central area of the main campus using "Making Colleges and Universities Accessible to the Handicapped Student" as a checklist (refer to Appendix Exhibit A) to determine each facility's degree of access. The survey was conducted with the assistance of the OT 150 class, and all facilities were categorized as fitting one of the descriptions as follows:

accessible
accessible with minor modifications
accessible with major modifications
inaccessible.

(Refer to Appendix Exhibit B for a copy of the listing.)

Asphalt curb ramps have been placed at major intersections designated by the results of the student survey. Concrete access ramps have been placed at several major buildings, such as the Administration Annex and the Humanities Building, and handrails have been placed at numerous buildings.

A survey of the current academic curriculum and its relationship to graduation possibilities and job opportunities according to the five degrees of handicap was conducted. The degrees of handicap are classified as:

Non-ambulatory
Quadriplegic
Hemiplegic
Blind
Deaf

The five degrees of handicap were defined as to each one's limitations; the graduation possibilities were assessed as: yes, difficult and no. (Refer to Appendix Exhibit C for a copy of the survey questionnaire and listing.)

A university-wide awareness program has been undertaken and recommendations have been made for the establishment of a central clearing house for the dissemination of all information pertinent to the disabled at Colorado State University (refer to Appendix Exhibit D for a copy of the proposed job description). A videotape which was recently prepared elaborates some of the problems encountered by the disabled at Colorado State University. This presentation was made available in the summer of 1974 and shown as part of the public awareness program.

Currently, the ad hoc committee consists of the following four subcommittees:

Admissions and Advising
Buildings and Campus Accessibility
Housing
Video and Publicity.

The Buildings and Campus Accessibility subcommittee is coordinating its efforts with a companion city group.

EXHIBIT

BUILDING ACCESSIBILITY

ACCESSIBLE

- Microbiology
- Wood Utilization Laboratory
- Social Sciences (Unit A)
- William E. Morgan Library
- Braiden Hall
- Student Center
- Danforth Chapel
- Auditorium-Gymnasium (Unit A)

ACCESSIBLE WITH MINOR MODIFICATIONS

- Physiology Research
- College Avenue Gymnasium
- Veterinary Medicine
- Veterinary Science
- Veterinary Barns, to be razed
- Industrial Arts Shops
- Engineering
- Student Health Service
- Ingersoll Hall
- Auditorium-Gymnasium (Units B and C)

ACCESSIBLE WITH MAJOR MODIFICATIONS

- Aggie Village, Unit #1
- Aggie Village, Unit #2
- Chemistry
- Humanities
- Administration Annex
- Arts-Industrial Arts

INACCESSIBLE

- BioPhysical Sciences
- Animal Sciences
- Social Sciences (Unit C)
- Aylesworth Hall
- Newsom Hall
- Ellis Hall
- Edwards Hall
- Military Sciences
- Agriculture
- Plant Sciences
- Vocational Education
- Student Services
- Forestry
- Johnson Hall
- Administration
- Old Economics, to be razed
- Old Chemistry
- Music
- Home Economics Annex
- Guggenheim Hall
- Rockwell Hall
- Faculty Apartments
- Lory Hall
- Durrell Center
- Durward Hall
- Westfall Hall

NEEDS

According to the Colorado Commission on Higher Education figures, more than 300,000 Colorado citizens, including students or potential students, are limited in mobility. With the Craig Rehabilitation Center located in Englewood, Colorado, and the advent of new medical techniques, the Colorado population of disabled citizens could reasonably be expected to increase. Current data for the 1973-74 academic year at Colorado State University indicate the following

		Students	Faculty and Staff
(a)	Wheelchair disabilities	7	N.A.
(b)	Ambulatory disabilities (i.e. post-polio, cerebial palsy, temporary ski injuries, etc.)	4,000 (450 permanent)	N.A.
(c)	Blindness	4	N.A.
(d)	Deafness	3	N.A.
(e)	Cardiac problems	6	N.A.
(f)	Obese	100	N.A.
	Total	4,120	17*

*Random sample of 1,955 faculty and staff.

1973-74 Academic Year;

Student Headcount - 16,860

Faculty and Staff Headcount - 3,592

UNIQUE PROGRAMS

Colorado State University as a major institution of higher education offers many unique programs to the state's system of higher education. In addition, Colorado State University receives support through the WICHE commitment in the Colleges of Veterinary Medicine and Biomedical Sciences and Forestry and Natural Resources and the Department of Occupational Therapy in the College of Home Economics. It should be noted, however, that the unique programs require the basic core type courses for graduation, and consideration should be given to the University-wide graduation requirements of English, physical education and speech and technical journalism.

The following is a summary of the unique programs offered at Colorado State University:

College of Agricultural Sciences

- Agricultural Business (B.S.)
- Agricultural Economics (B.S., M.Agr.)
- Agricultural Industries Management (B.S.)
- Agricultural Journalism (B.S.)
- Agronomy (B.S., M.Agr., M.S., Ph.D.)
- Avian Science (B.S., M.Agr., M.S., Ph.D.)
- Bio-Agricultural Science (B.S.)
- Farm and Ranch Management (B.S.)
- Food Technology (B.S.)
- General Agriculture (B.S.)
- Genetics (M.S., Ph.D.)
- Horticulture (B.S., M.Agr., M.S., Ph.D.)
- Landscape Horticulture (B.S.)
- Nutrition (M.S., Ph.D.)
- Vocational Agriculture (B.S.)

College of Engineering

- Agricultural Engineering (B.S., M.S., Ph.D.)
- Atmospheric Science (M.S., Ph.D.)

College of Forestry and Natural Resources

Fishery Biology (B.S., M.S., Ph.D.)
Forest Biology (B.S., M.F., M.S., Ph.D.)
Forest Science (B.S., M.F., M.S., Ph.D.)
Natural Resources (B.S., M.S.)
Natural Resources Conservation Education (B.S.)
Outdoor Recreation (B.S., M.S., Ph.D.)
Range Ecology (B.S., M.S., Ph.D.)
Range-Forest Management (B.S., M.S., Ph.D.)
Watershed Management (B.S., M.S., Ph.D.)
Wildlife Biology (B.S., M.S., Ph.D.)
Wood Science and Technology (B.S., M.F., M.S., Ph.D.)

College of Home Economics

Child Development and Family Relations (B.S., M.H.Ec.)
Consumer Sciences (B.S.)
Consumer Sciences and Housing (M.H.Ec.)
Food Science and Nutrition (B.S., M.H.Ec., M.S., Ph.D.)
Housing and Design (B.S.)
Occupational Therapy (B.S., M.S.)
Textiles and Clothing (B.A., M.S., M.H.Ec., M.A.)

College of Humanities and Social Sciences

Hearing and Speech Science (B.S., M.S.)
Industrial Sciences (M.Ed.)
Industrial Arts (B.S.)
Industrial Construction Management (B.S.)
Manufacturing (B.S.)
Technical Journalism (B.A.)
Vocational Education (M.Ed., Ph.D.)

College of Natural Sciences

Biochemistry (M.S., Ph.D.)
Entomology (B.S., M.S.)

College of Veterinary Medicine and Biomedical Sciences

Clinical Sciences (M.S., Ph.D.)
Environmental Health (B.S.)
Pathology (M.S., Ph.D.)
Physiology and Biophysics (M.S., Ph.D.)
Radiology and Radiation Biology (M.S., Ph.D.)
Veterinary Science (B.S.)

SECTION VI

BUILDING PRIORITY RATIONALE

Colorado State University has combined the results of the graduation possibility/degree of handicap survey and the building accessibility survey. The following is a summary of the courses listed with the number of the types of handicap that can graduate from said courses according to the columnar listing of yes, difficult and no. Courses unique to Colorado State University are indicated.

YES

Avian Science (5)*
Botany and Plant Pathology (5)
Child Development and Family Relationships (5)*
Electrical Engineering (5)
Mathematics (5)

Agronomy (4)*
Atmospheric Science (4)*
Economics (4)
Engineering Science (4)
Food Science and Nutrition (4)*
History (4)
Mathematics and Statistics, Computer Science (4)
Physical Education (4)
Speech and Theatre Arts (4)
Sociology (4)
Technical Journalism (4)*

Agricultural Engineering (3)*
Anthropology (3)
Business (3)
Civil Engineering (3)
Entomology (3)*
Foreign Languages (3)
Forest and Wood Science (3)*
Occupational Therapy (3)*
Pathology (3)*
Philosophy (3)
Physiology and Biophysics (3)*
Political Science (3)
Psychology (3)
Statistics (3)

Animal Sciences (2)
Art (2)
Fishery and Wildlife Biology (2)*
Geology (2)
Horticulture (2)*
Industrial Sciences (2)*
Microbiology (2)
Music (2)
Radiology and Radiation Biology (2)*
Textiles and Clothing (2)*

Anatomy (1)
Animal Reproduction (1)
Hearing and Speech Science (1)*
Mechanical Engineering (1)
Physics (1)
Vocational Education (1)*
Watershed Sciences (1)*
Zoology (1)

DIFFICULT

Agronomy (labs) (1)*
Art (1)
Atmospheric Science (1)*
Business (1)
Economics (1)
Foreign Languages (1)
History (1)
Industrial Sciences (1)*
Mathematics and Statistics, Computer Science (1)
Pathology (1)*
Philosophy (1)
Physiology and Biophysics (1)*
Political Science (1)
Zoology (1)

Anatomy (2)
Agricultural Engineering (2)*
Chemistry (2)
Civil Engineering (2)
Horticulture (labs) (2)*
Mechanical Engineering (2)
Physics (2)
Psychology (2)
Statistics (2)
Textiles and Clothing (2)*

Animal Sciences (3)
Biochemistry (3)*
Hearing and Speech Science (3)*
Radiology and Radiation Biology
Vocational Education (3)*

NO

Business (1)
Food Science and Nutrition (1)*
Foreign Languages (1)
Forest and Wood Science (labs) (1)*
Hearing and Speech Science (1)*
Occupational Therapy (1)*
Pathology (labs) (1)*
Philosophy (1)
Physical Education (1)
Physiology and Biophysics (1)*
Political Science (1)
Speech and Theatre Arts (1)
Technical Journalism (1)*
Textiles and Clothing (1)*
Vocational Education (1)*

Anatomy (2)
Art (2)
Biochemistry (2)*
Entomology (2)*
Industrial Sciences (2)*
Mechanical Engineering (2)
Physics (2)

Chemistry (3)
Fishery and Wildlife Biology (3)*
Geology (3)
Microbiology (3)
Music (3)
Zoology (3)

Animal Reproduction (4)
Watershed Sciences (4)*

Aerospace Sciences (5)*

*Programs unique to Colorado State University per J. R. Schoemer to J. F. Wartgow March 7, 1974 letter

This list was coordinated with the first survey taken (the accessibility of various buildings; refer to Appendix Exhibit A) and consideration was given to whether these buildings had a high or low frequency of usage. The possibility of departmental relocation was assessed with consideration of the present and proposed future usage of buildings. Existing buildings designated as having an 80 percent or greater degree of accessibility were given lower priority. Lower priority buildings include the Student Center, Student Health, Morgan Library, Microbiology and Danforth Chapel.

The following buildings currently under construction were presumed to meet standards:

- Art Phase I
  - Sculpture
  - Ceramics
- Art Phase II
  - Industrial Design
  - Design
  - Weaving
  - Interior Design
  - Drawing and Painting
  - Graphics
  - Print Making
  - Photography
  - Jewelry and Metal Smith
- Consumer Sciences
  - Food Science and Nutrition
  - Textiles and Clothing
  - Child Development and Family Relations
- Natural Resources
  - Range Science
  - Fishery and Wildlife Biology
  - Recreation Resources
  - Watershed Sciences
  - Natural Resources
  - Forestry and Wood Sciences
- University Village II
  - Married Student Housing

Buildings and facilities with approved program plans for which construction funds are being requested are:

- Integrated Physical Education Facility Addition
  - Departments of Physical Education
  - Intramurals
  - Intercollegiate Athletics
  - Recreation

Old Chemistry Building

- Mathematics
- Statistics
- Information Systems (ADP)

Guggenheim Hall

- Industrial Sciences

Home Economics Annex

- Department of Education

Ammons Hall

- Dance Programs
- Physical Education

South College Avenue Gymnasium Fieldhouse Complex

- Physical Education
- Intramural Programs

During the Second Session of the Forty-Ninth Session of the General Assembly, funds were appropriated in the amount of $20,000. Colorado State University utilized these funds in making the following buildings accessible:

Liberal Arts

- English
- Language
- Speech and Theatre Arts
- Philosophy

Anatomy-Zoology

- Anatomy
- Zoology
- Entomology

Foothills Campus Facilities are not part of this program plan and will be included in a separate document. New facilities on the Agriculture and Pingree Park Campuses will be made accessible as necessary.

First priority has been given to the Student Services, Administration Annex and Johnson Hall complex. Functions in this complex serve all University departments, including future students and faculty and staff, in addition to having a higher degree of off-campus traffic. Based upon the aforementioned rationale, the following represents the priority listing:

#1 Priority -- Student Services
Administration Annex
Johnson Hall

#2 Priority -- Plant Sciences
Basement and First Floor All Wings
E Wing All Floors

#3 Priority -- Chemistry

#4 Priority -- Engineering Complex
Main Arcade
B Wing
E Wing

#5 Priority -- Social Sciences

#6 Priority -- Humanities

#7 Priority -- Morgan Library

#8 Priority -- Physiology

#9 Priority -- Aylesworth Hall

#10 Priority -- Old Forestry

#11 Priority -- Veterinary Medicine

#12 Priority -- Student Center
Auditorium-Gymnasium
Hughes Stadium

#13 Priority -- Aggie Village I
Parmelee Hall*

*In the event the entire project as set forth in the program plan is not funded in total, Colorado State University would restructure the priorities contingent upon funds made available.

With the adaptation of the above facilities, Colorado State University facilities generally will meet the "Architectural Accessibility Law, Senate Bill 47-1965, as amended." It should be noted that the criteria for determination of accessibility of all facilities are provided in the checklist entitled, "Colorado Governor's Committee to Promote Opportunities for the Handicapped - Inspection of Accessibility Decal Checklist" (refer to Appendix Exhibit E). As modified by Colorado State University, the checklist is considered less demanding than the SB 47-1965 or Federal guidelines which have to be followed when Federal funds are used for the construction of facilities. Adaptation costs to meet Federal standards would be considerably higher. Furthermore, campus experience indicates that true accessibility requires certain items which have not been included; some of the items were omitted from the Governor's Checklist for cost reasons. Several other facilities have been considered (Animal Sciences; Agriculture Building basement, second and third floors; and Guggenheim Hall) but were excluded because of the high cost/station ratio. The following facilities are not considered accessible:

Military Science
Administration
Old Economics (to be razed)
Industrial Science (to be razed)
Music
Guggenheim
Animal Sciences
Agriculture
Physical Plant

FORT LEWIS COLLEGE

The recommendations to make Fort Lewis College accessible to the physically handicapped student are summarized below. In addition to making classes accessible, an investment in the renovations suggested will also make the campus accessible to the community and maintain the college as a cultural activity center for Durango.

Recommendations are listed below in order of priority.

Academic & Administration Building	$3,150
Student Center	5,428
Theater	5,300
Library	3,185
Fine Arts Building	2,080
Health Center	600
Physical Education Building	4,625
Cooper Hall (Womens Dormitory)	5,850
Escalante (Mens Dormitory)	432
Total Recommendation	$30,650

COLORADO COMMISSION ON HIGHER EDUCATION
Elimination of Architectural Barriers
Initial Survey

Please complete this survey form, retain a copy for your files, and return the original to: Dr. Jerome F. Wartgow, Assistant Director, Colorado Commission on Higher Education, 719 State Services Building, Denver, Colorado 80203.

The survey should be received by CCHE prior to the "Workshop on Elimination of Architectural Barriers," scheduled for March 11, 1974.

I. Name of Institution Fort Lewis College
II. Chairman of Committee on Architectural Barriers Edwin W. Ned Wallace
(or person completing this form) Dean of Administration
III. Telephone 247-7265
IV. Estimated Number in each of the following categories currently at the institution:

	Students	Faculty and Staff
(a) Wheelchair Disabilities	0	0
(b) Ambulatory Disabilities (i.e. post polio, cerebral palsy, temporary ski injuries, etc.)	15	2
(c) Blindness	5 (1)	0
(d) Deafness	unknown	4
(e) Cardiac Problems	12	6
Total	32	12

V. Please list any programs offered by your institution that, to the best of your knowledge, are unique within the system of Public Higher Education in the State of Colorado (i.e. B.S.-Veterinary Science; Ph.D.-Nursing; A.A.-Blacksmithing;etc.)

CCHE 2/74

INSTITUTION: Fort Lewis College

BUILDING: Academic & Administration Building

PRINCIPAL TENANT: Administration offices

FUNTIONAL USE: Offices, classrooms and lecture halls.

SURVEY RESULTS:

There are no adequate toilet facilities to accommodate the handicapped and an access side walk should be installed to allow access from the other buildings closer into campus, (approx 30 feet).

RECOMMENDATIONS:	JOB $
1. Install sidewalk 30 ft. @ $5/ft.	$150
2. Adapt toilet facilities (2) M&W (adapt less sinks and urinals)	$3,000
TOTAL:	$3,150

INSTITUTION: Fort Lewis College

BUILDING: Student Center

PRINCIPAL TENANT: Student Services

FUNTIONAL USE: Lounges, T.V. room and cafeteria.

SURVEY RESULTS:

There are a series of steps to be ramped one with a rise of 22 in. and the other area requires 3 ft. of handrail. There are no adequate toilet facilities for the handicapped.

RECOMMENDATIONS:

		JOB $
1.	Ramp 22 in. rise of steps	$2,200
2.	Install handrail 3 ft.	$48
3.	Adapt toilet facilities (2) M&W (adapt less sinks and urinals)	$3,000
4.	Add side bubbler to water fountain	$180
	TOTAL:	$5,428

INSTITUTION: Fort Lewis College

BUILDING: Theater

PRINCIPAL TENANT: Theater Department and Performing Arts

FUNTIONAL USE: Theater and scene shops.

SURVEY RESULTS:

Entrance doors to building are narrow. Restrooms are not adequate for the handicapped and the doors to the restrooms are narrow.

RECOMMENDATIONS:

		JOB $
1.	Widen entrance doors to 36 in. (replace one door and install glass panel for other door)	$800
2.	Widen doors to restrooms (2)	$1500
3.	Adapt restroom facilities (2) M&W (adapt less sinks and urinals)	$3,000
	TOTAL:	$5,300

INSTITUTION: Fort Lewis College

BUILDING: Library

PRINCIPAL TENANT: Learning Resource Center

FUNTIONAL USE: Study areas and books.

SURVEY RESULTS:

Entrance is inhibited by a turnstile for security purposes. The restrooms are not adequately adapted for the handicapped and the elevator is not brailled for the blind and is run by a key.

RECOMMENDATIONS:

		JOB $
1.	Adapt turnstile to handle wheelchairs.	$ -0-
2.	Adapt restrooms to handle the handicapped (adapt less sinks and urinals)	$3,000
3.	Lower drinking fountain	$180
4.	Braille mark elevator	$5
	TOTAL:	$3,185

INSTITUTION: Fort Lewis College

BUILDING: Fine Arts

PRINCIPAL TENANT: Art Department

FUNTIONAL USE: Classrooms and art labs.

SURVEY RESULTS:

Entrance door is narrow and the facility needs adequate approach route from parking lot. The restrooms are equipped with raised toilets and grab bars but lack minor amenities.

RECOMMENDATIONS:

		JOB $
1.	Widen entrance door	$1,500
2.	Adapt restrooms (2) M&W (mirror, inulation, towel disp & cut-out space in sink counter)	$400
3.	Add side bubbler to water fountain.	$180
	TOTAL:	$2,080

INSTITUTION: Fort Lewis College

BUILDING: Health Center

PPINCIPAL TENANT: Student Health Services.

FUNTIONAL USE: Health Center

SURVEY RESULTS:

The building is a one level temporary that could be accessible if the entrance sidewalk were widened and the 5 in. step at the door were ramped.

RECOMMENDATIONS:

		JOB $
1.	Widen side walk.	$100
2.	Ramp 5 in. step.	$500
	TOTAL:	$600

INSTITUTION: Fort Lewis College

BUILDING: Physical Education Building

PRINCIPAL TENANT: P.E. Department

FUNTIONAL USE: Basketball Hall, locker rooms and offices.

SURVEY RESULTS:

Entrance doors to building are narrow and the toilet facilities are inadequate for the handicapped.

RECOMMENDATIONS:

		JOB $
1.	Widen entrance doors.	$1,500
2.	Adapt adequate toilet facilities (2) (adapt less sinks and urinals) M&W	$3,000
3.	Lower public telephone	$125
	TOTAL:	$4,625

INSTITUTION: Fort Lewis College

BUILDING: Cooper Hall (Dormatory)

PRINCIPAL TENANT: Women

FUNTIONAL USE: Womens dormatory

SURVEY RESULTS:

Access to building through the lounge is prohibited by a 6 in. step and access to the inner lounge in prohibited by a rise of 18 in. (the inner lounge would not be accessible from the rooms unless this ramp were installed). There are private bathrooms to serve a suite of four girls. One of these suites should be adapted to accomidate at least four handicapped girls.

RECOMMENDATIONS:

		JOB $
1.	Ramp 6 in step to lounge.	$600
2.	Ramp interior rise of 18 in.	$3,150
3.	Make accessible one suite for the handicapped (toilet, sink & shower)	$2,100
	TOTAL:	$5,850

INSTITUTION: Fort Lewis College

BUILDING: Escalante (Dormatory)

PRINCIPAL TENANT: Men

FUNTIONAL USE: Mens Dormatory

SURVEY RESULTS:

There is no handrail at the entrance of the building. 27 ft. required.

RECOMMENDATIONS:	JOB $
1. Install 27 ft. of handrail.	$432
TOTAL:	$432

ADAMS STATE COLLEGE

Implementation of the plan for removal of architectural barriers at Adams State College will eliminate architectural barriers to the extent that handicapped students will not be denied access to any educational offering on the campus. The Task Force supports the second alternative presented by Adams State College.

A summary of recommendations, listed in building priority order are as follows:

Learning Resource Center	$ 32
College Center	4,487
Science & Industrial Arts (includes elevator)	41,273
Education-Social Studies Building	4,212
Music Building	4,504
Art Building	11,648
Coronado Hall	9,212
Houtchen's Hall	4,350
Total Recommendation	$79,718

COLORADO COMMISSION ON HIGHER EDUCATION
Elimination of Architectural Barriers
Initial Survey

Please complete this survey form, retain a copy for your files, and return the original to: Dr. Jerome F. Wartgow, Assistant Director, Colorado Commission on Higher Education, 719 State Services Building, Denver, Colorado 80203.

The survey should be received by CCHE prior to the "Workshop on Elimination of Architectural Barriers," scheduled for March 11, 1974.

I. Name of Institution Adams State College

II. Chairman of Committee on Architectural Barriers Everett V. Manchester
(or person completing this form)

III. Telephone 589-7346

IV. Estimated Number in each of the following categories currently at the institution:

	Students	Faculty and Staff
(a) Wheelchair Disabilities	2	
(b) Ambulatory Disabilities (i.e. post polio, cerebial palsy, temporary ski injuries, etc.)	5	4
(c) Blindness	1	
(d) Deafness	3	
(e) Cardiac Problems		2
Total	11	6

V. Please list any programs offered by your institution that, to the best of your knowledge, are unique within the system of Public Higher Education in the State of Colorado. (i.e., B.S.-Veterinary Science; Ph.D.-Nursing; A.A.-Blacksmithing; etc.)

CCHE 2/74

Bachelor of Arts - Selected Studies

ADAMS STATE COLLEGE
ALAMOSA, COLORADO 81101

EXHIBIT A

Office of Campus Development

August 1, 1974

ARCHITECTURAL BARRIERS STUDY AND REQUEST FOR FUNDS TO REMOVE SUCH BARRIERS ON THE ADAMS STATE COLLEGE CAMPUS.

I. Introduction

At the request of the Colorado Commission on Higher Education, a survey has been conducted on the Adams State College Campus. Based on the survey, it is the desire of Adams State College to make as many of the physical facilities accessible to the handicapped as possible within the limits of the funds allocated by Colorado State Legislature.

The following specific objectives need to be considered. It will be necessary to:

1. Provide ramps at parking lots, sidewalks, entrances to buildings, and on various floors of buildings where needed.
2. Provide circulation space for wheelchairs.
3. Widen doors.
4. Install handrails where needed on stairs.
5. To make usable toilet areas in buildings.
6. To make public telephones available for use.

It is the goal of Adams State College to enable any handicapped student who wishes to attend Adams State College without any serious barriers to his or her ability to attend classes and to prepare for a future occupation, which will enable them to provide an adequate living.

To the year 1965, there were no specific provisions made in any of the physical facilities built on the Adams State College Campus. Since 1965, architects have complied to some extent with the building code; however, everything that should have been done was not done.

Based upon a demand use by students for course work in course load, the following buildings are in need of major modification to meet the necessary requirements.

1. Industrial Arts & Science
2. Education and Social Studies
3. Learning Resource Center
4. College Center & Cafeteria
5. Music Building (substituted for Richardson Hall)
6. Houtchens Hall
7. Coronado Hall
8. Art Building

The following buildings are in need of modification to meet the necessary requirements:

1. Planetarium & Observatory
2. Leon Memorial
3. Plachy Hall
4. Children's Speech & Hearing Clinic

EXHIBIT A

Architectural Barriers

The following buildings are currently under renovation and will meet the code.

1. The old Library for Business Education and Foreign Language.
2. Richardson Hall for Administration, Speech Arts, Theatre and some Music

II. Need Assessment

At the present time, we have the following handicapped people on campus:

1. Wheelchair disabilities - two students
2. Ambulatory disabilities - five students
3. Blindness - one student
4. Deafness - three students
5. Cardiac - none
6. Limited mobility - two students and two faculty

Of the above thirteen students, all are sophomores, and will be here two more years. The two faculty members are on tenure, and it can be assumed they will be here until they retire. At the present time, we have no way of making anywhere near an accurate projection of the number of handicapped people who might attend Adams State College. However, it is safe to assume that from ten to fifteen handicapped students, or more, will be attending Adams State College every year.

III. Identification of Unique Programs

The programs at Adams State College fall under three particular areas; that of Teacher Education, Liberal Arts, and the Pre-professional Programs. The following academic buildings are used consistently in teaching the general education requirements as well as required courses in majors and minors for the areas mentioned above.

1. Industrial Arts and Science Building
2. Education and Social Studies Building
3. Business Education Building
4. Music Building
5. Art Building
6. Plachy Hall

IV & V. Results of Campus Survey and Detailed Building Analyses.

Pages Three (3) through Six (6) indicate the priority by quartile. Pages Seven (7) through twenty-one (21) give the detailed building analysis, the estimated cost and recommendations for each building.

BUILDING NEEDS FOR HANDICAPPED

EXHIBIT A

Architectural Barriers

BUILDING: Industrial Arts & Science NUMBER: 1001 & 1002
CONSTRUCTED: 1960 AREA SQ. FT.: 51,074 ROOMS: 89 ACTIVITY STATIONS: 864
PRINICPAL TENANTS: Industrial Arts, Biology, Chemistry, Geology, Mathematics Physics
FUNCTIONAL USE: Classroom, laboratories, and office space for staff

SURVEY RESULTS:

Item	No.	Location	Description
Doors Outside	2	West entrance	Double panic bar, each open to 28"
Doors Inside - marking for blind	88		All interior doors open to 33"
Ramps to Buildings	2	South and west entrance	Concrete 4'x11' - slope sidewalk level to 5-1/2"
Handrails	4 sets	On ramps	25' long each
Platforms (Exterior)	1	Between I/A & Science west entrance	Concrete 4'x12'x5-1/2"
Elevator	1	Just off main lobby	First to second floor one person lift
Drinking Fountain	2	First & second floor	Cup dispenser
Rest Rooms	2	First floor-south corridor Science	2 stalls in each rest room
Stalls	*2	Women's - west stall Men's - east stall	Door 21" - stall 32"-25-1/2" Door 21-1/2" - stall 30"
Handrails	2 sets	1 set for each rest room	Complete
Lavatory	6	4 in men's 2 in women's	30" high drain insulation on pipes
Mirrors	2	1 in each rest room	22" x 16"
Parking	3 spaces	Spaces on north edge of lot west adjacent to building	Remark spaces to 12' 3 signs
Curb and/or Curb Cuts	1	North-east corner of lot	Curb cut

* Stalls in women's rest room have brick wall - stall angles from 32" in front to 25-1/2" at stool. Should remove inside door at entrance of rest room. Men's stall has brick partition on east side - should remove interior door frame at entrance to rest room.

RECOMMENDATIONS:

2	Ramps - 25" rise @ $2,500	$ 5,000.00
4	Handrails @ $400	1,600.00
1	Platform at west entrance 4x12x16	125.00
2	Metal cup dispensers @ $4.00	8.00
2	Rest room modifications @ $2,100	4,200.00

3 Parking spaces at north edge of parking lot - remark & sign @ $50.00	$ 150.00	
1 Curb cut in sidewalk @ $150.00	150.00	
1 Elevator @ $25,000	25,000.00	
6 Special laboratory tables @ $840.00	5,040.00	
SUB-TOTAL		$ 41,273.00

BUILDING: Planetarium & Observatory NUMBER: 1003
CONSTRUCTED: 1964 AREA SQ. FT.: 4,342 ROOMS: 11 ACTIVITY STATIONS: 74
PRINCIPAL TENANTS: Astronomy
FUNCTIONAL USE: Office for staff and laboratory

SURVEY RESULTS:

Item	No.	Location	Description
*Stairs	16 steps	Lobby to laboratory	Narrow stairwell, 16 steps, 112" raise
Drinking Fountain	1	Main lobby	Cup dispenser
Restrooms	Restrooms impossible to renovate to standard		
Parking		Served by specifications in other buildings.	

* Interior stairs to show room impossible to renovate to standards.

RECOMMENDATIONS:

1 Metal Cup Dispenser @ $4.00	$ 4.00

Impossible to renovate any part of the building to standards.

BUILDING: Richardson Hall NUMBER: 1004
CONSTRUCTED: 1924 AREA SQ. FT.: 71,304 ROOMS: 144 ACTIVITY STATIONS: 1,253
PRINCIPAL TENANTS: Administration, Drama, two Federal Programs
FUNCTIONAL USE: Administration - Music - Speech-Theatre

SURVEY RESULTS:

Item	No.	Location	Description
Parking	3 spaces	Lot north of building	Signs & remarked
Curb and/or Curb Cuts	1	South edge of lot	Curb cut

This building is undergoing a complete renovation. Barrier removal costs included in renovation.

RECOMMENDATIONS:

3 Parking spaces - sign & remark @ $50.00	$ 150.00	
1 Curb cut - south edge of lot @ $150.00	150.00	
SUB-TOTAL		$ 300.00

BUILDING: Business Education & Foreign Language NUMBER: 1005
CONSTRUCTED: 1954 - Renovated 1974 AREA SQ. FT: 24,046
ROOMS: 57 ACTIVITY STATIONS: 538
PRINCIPAL TENANTS: Business, Economics, Foreign Lanugage, and Central Assigned Classrooms
FUNCTIONAL USE: Classroom, laboratories, and office space for staff

SURVEY RESULTS:

Item	No.	Location	Description
Parking	3 spaces	North richardson Hall lot	Signs and remarked

This building is being renovated during the summer of 1974. It will be ready for classes the fall quarter of 1974. It will meet the handicapped code.

RECOMMENDATIONS:

3 Parking spaces - sign & remark @ $50.00 $ 150.00

BUILDING: Music NUMBER: 1006
CONSTRUCTED: 1957 AREA SQ. FT.: 16,779 ROOMS: 44 ACTIVITY STATIONS: 379
PRINCIPAL TENANTS: Music
FUNCTIONAL USE: Classrooms, laboratories, and office space for staff

SURVEY RESULTS:

Item	No.	Location	Description
Doors Inside		All doors	Braille markings
Drinking Fountain	1	First floor, main corridor	Cup dispenser
Rest Rooms	2	First floor, main corridor	Men's & women's
Stalls	2	One in each rest room	Enlarge
Handrails	2 sets	One in each rest room	Install
Lavatory	2	One in each rest room	Insulation
Mirrors	2	One in each rest room	Lower
Parking	3 spaces	East edge, north Richardson Hall lot	Signs and remark
Curb and/or Curb Cuts	1	East edge of above lot	Curb cut

Students may receive all phases of Music Education and not have to use second floor in this building.

RECOMMENDATIONS:

1	Metal Cup Dispensers @ $4.00	$ 4.00	
2	Rest room modifications @ $2,100.00	4,200.00	
3	Parking spaces, north Richardson Parking lot, sign and remark @ $50.00	150.00	
1	Curb cut east edge Richardson Parking lot @ $150.00	150.00	
	SUB-TOTAL		$ 4,504.00

BUILDING: Leon Memorial NUMBER: 1007

CONSTRUCTED: 1968 AREA SQ. FT.: 5,615 ROOMS: 14 ACTIVITY STATIONS: 203

PRINCIPAL TENANTS: Music

FUNCTIONAL USE: Laboratories and office space for staff

SURVEY RESULTS:

Item	No.	Location	Description
Doors Inside	7		Braille markings
Drinking Fountain	1	Main corridor	Cup dispenser
Rest Rooms	2	Main corridor	Complete remodel of Men's and Women's remove interior door
Stalls	2	Men's & women's	Enlarge
Handrails	2 sets	One set each rest room	Install
Curtains	2	Each rest room	Replace interior doors
Mirrors	2	Each rest room	Lower setting
Parking	3 spaces	Richardson Hall north lot	Signs and remark
Curb and/or Curb Cuts	1	Richardson Hall north lot	Curb cut

RECOMMENDATIONS:

1	Metal Cup Dispenser @ $4.00	$ 4.00	
2	Rest Room Modifications @ $2,100.00	4,200.00	
3	Parking Spaces, Richardson Hall Lot Signs and Remark @ $50.00	150.00	
1	Curb Cut Northeast Corner Richardson Hall Parking Lot @ $150.00	150.00	
	SUB-TOTAL		$ 4,504.00

BUILDING NEEDS FOR HANDICAPPED

EXHIBIT A

Architectural Barriers

BUILDING: Education - Social Studies Building NUMBER: 1008
CONSTRUCTED: 1967 AREA SQ. FT.: 70,696 ROOMS: 196 ACTIVITY STATIONS: 1,598
PRINCIPAL TENANTS: Teacher Education, Social Studies, Humanities, Special Education, Cultural & Sociaological Studies, and Psychology
FUNCTIONAL USE: Classrooms, laboratories and office space for staff

SURVEY RESULTS:

Item	No.	Location	Description
Doors Outside	1	West entrance	Double doors, panic bar type, also double in sequence
Doors Inside	190	Each door	Braille markings
Elevator	1	South corridors	Braille numbers to be placed
Drinking Fountain	3	One on each of three floors	Cup dispensers
Rest Rooms	*2	First floor, north corridor	
Stalls	2	One each men's & women's	24" doors - 31" stalls
Handrails	2 sets	One each men's & women's	
Curtains	2	One each men's & women's	
Labatory	4	Two each men's & women's	Insulation on drain pipes
Mirrors	2	One each men's & women's	17" x 22" - mounted
Stools	2	One each men's & women's	18" high

*May have to remove inside entrance doors to rest rooms.

RECOMMENDATIONS:

3 Metal cup dispensers @ $4.00	$ 12.00	
2 Rest room modifications @ $2,100.00	4,200.00	
SUM-TOTAL		$ 4,212.00

BUILDING: Rex Gymnasium NUMBER: 1009
CONSTRUCTED: 1939 AREA SQ. FT.: 22,599 ROOMS: 28 ACTIVITY STATIONS: 50
PRINCIPAL TENANTS: H.P.E.R., Veteran's Office, UMAS Office
FUNCTIONAL USE: Classrooms

SURVEY RESULTS:

Building not included in survey due to the following reasons:
1. Will not be used by handicapped students
2. Handicapped students can get what they need in other buildings
3. Too costly to revise for handicapped

RECOMMENDATIONS:

Not to be used by handicapped students.

BUILDING NEEDS FOR HANDICAPPED

EXHIBIT A

Architectural Barriers

Handrails	1 set	Main entrance west side	3 step ramp
Rest Rooms	*1	Main corridor	Complete bathroom, tub, stool, etc.
Handrails	1 set	Above rest room	Install
Lavatory	1	Above rest room	Insulation on Pipes
Mirrors	1	Above rest room	Lower mounting
Parking		Richardson Avenue street parking	
Curb and/or Curb Cuts	**1	Off Richardson Avenue	Curb cut

* Rest room needs complete remodeling - way too small to accomodate wheelchairs.
** Possibly use present cut to old garage space.

RECOMMENDATIONS:

Impossible to modify rest room to meet standards

1	Ramp at Main Entrance - west side @ $2,500.00	$ 2,500.00	
2	Hand rail 25' long @ $16.00/ft.	800.00	
1	Metal cup dispenser @ $4.00	4.00	
1	Curb Cut @ $150.00	150.00	
	SUB-TOTAL		$ 3,454.00

BUILDING: Communications Building NUMBER: 1012
CONSTRUCTED: 1949 AREA SQ. FT.: 1,504 ROOMS: 11 ACTIVITY STATIONS: 15
PRINCIPAL TENANTS: Radio Station, S.C.E.D.D. Offices
FUNCTIONAL USE: Broadcasting Techniques & Office Space

SURVEY RESULT:

Indicates that it would be too costly to modify to meet standards.

RECOMMENDATIONS:

Impossible to modify to meet standards.

BUILDING: Art Building NUMBER: 1013
CONSTRUCTED: 1957, Renovated: 1970 AREA SQ. FT.: 17,600
ROOMS: 28 ACTIVITY STATIONS: 138
PRINCIPAL TENANTS: Visual Arts
FUNCTIONAL USE: Classrooms, laboratories, and office space for staff

BUILDING NEEDS FOR HANDICAPPED

EXHIBIT A

Architectural Barriers

SURVEY RESULTS:

Item	No.	Location	Description
Ramps	2	North & south entrance to main lobby	3-step raise on each
Handrails	2 sets	For above ramps	Install
Drinking Fountain	1	North corridor	Cup dispenser
Rest Rooms	2	North corridor	Men's & women's
Stalls	2	One in each rest room	Enlarge
Handrails	2 sets	One in each rest room	Install
Lavatory	2	One in each rest room	Insulation on pipes
Mirrors	2	One in each rest room	Lower to standard
Parking	3 spaces	Lot south of building	Signs and remark
Curb and/or Curb Cuts	1	North end of south lot	Curb cut

RECOMMENDATIONS:

2	Ramps @ $2,100.00	$ 4,200.00	
4	Handrails @ $16.00/ft.	2,944.00	
2	Restroom modifications @ $2,100.00	4,200.00	
1	Metal cup dispenser @ $4.00	4.00	
3	Parking Spaces - Signed & Remarked @ $50.00	150.00	
1	Curb ramp & cut @ $150.00	150.00	
	SUB-TOTAL		$ 11,648.00

BUILDING: Learning Resource Center NUMBER: 1014

CONSTRUCTED: 1973 AREA SQ. FT.: 77,058 ROOMS: 102 ACTIVITY STATIONS: 899

PRINCIPAL TENANTS: Library use for all students and faculty.

FUNCTIONAL USE: Storage of books, audio-visual for reference use by students and faculty

SURVEY RESULTS:

Item	No.	Location	Description
Elevator	1	Center	Braille numbers
Drinking Fountain	3		Cup dispenser
Mirrors	2	Each rest room	17"x22"

RECOMMENDATIONS:

3	Metal cup dispensers @ $4.00	$ 12.00	
2	Aluminum Frame Wall Mirrors @ $10.00	20.00	
	SUB-TOTAL		$ 32.00

BUILDING: Electric Sub-station NUMBER: 2001
CONSTRUCTED: 1957 AREA SQ. FT.: 140 ROOMS: 1 ACTIVITY STATIONS: 0
PRINCIPAL TENANTS: None
FUNCTIONAL USE: Distribution of electricity

SURVEY RESULTS: Not to be used by students or faculty

RECOMMENDATIONS: None

BUILDING: Central Heating Plant NUMBER: 2002
CONSTRUCTED: 1958 AREA SQ. FT.: 3,220 ROOMS: 3 ACTIVITY STATIONS: 3
PRINCIPAL TENANTS: Boiler Operators
FUNCTIONAL USE: Heating

SURVEY RESULTS: Not included in surveys. Not for student use.

RECOMMENDATIONS: None

BUILDING: Motor Center NUMBER: 2005
CONSTRUCTED: 1946 AREA SQ. FT.: 8,714 ROOMS: 4 ACTIVITY STATIONS: 4
PRINCIPAL TENANTS: Maintenance staff
FUNCTIONAL USE: Storage and repair of vehicles

SURVEY RESULTS: Not included in survey. Will not be used by handicapped.

RECOMMENDATIONS: None

BUILDING: Maintenance and Warehouse NUMBER: 2006
CONSTRUCTED: 1969 AREA SQ. FT.: 14,987 ROOMS: 22 ACTIVITY STATIONS: 54
PRINCIPAL TENANTS: Maintenance staff
FUNCTIONAL USE: Repair areas, storage and office space for staff

SURVEY RESULTS: Not to be used by students

RECOMMENDATIONS: None

BUILDING: College Center NUMBER: 3003
CONSTRUCTED: 1970 AREA SQ. FT.: 93,905 ROOMS: 192 ACTIVITY STATIONS: 2,037
PRINCIPAL TENANTS: College students and faculty
FUNCTIONAL USE: Food service, recreation and entertainment and office space for staff.

EXHIBIT A

Architectural Barriers

SURVEY RESULTS:

Item	No.	Location	Description
Drinking Fountain	3	Two on first floor, one on second floor	Cup dispenser
Mirrors	2	Rest rooms, north corridor	17:x22" 40" high
Public Telephone	1	North corridor	Lower to 4'
Parking	3 spaces	South edge north lot adjacent to building	Signs and remark

RECOMMENDATIONS:

3	Metal cup dispensers @ $4.00	$ 12.00	
2	Rest room modification @ $2,100.00	4,200.00	
1	Public telephone to be lowered @ $125.00	125.00	
3	Parking spaces remarked and signed @ $50.00	150.00	
	SUB-TOTAL		$ 4,487.00

BUILDING: Football Stadium NUMBER: 3004

CONSTRUCTED: 1949 AREA SQ. FT.: 9,128 ROOMS: 3 ACTIVITY STATIONS: 1,976

PRINCIPAL TENANTS: Department of Intercollegiate Athletics

FUNCTIONAL USE: Football games, track meets, concerts, community meetings, and other special events

RECOMMENDATIONS: Handicapped people to occupy east bleacher area by putting sheelchair at the seating area on south end. Impossible to modify present stadium.

BUILDING: Pettys Hall NUMBER: 8001

CONSTRUCTED: 1958 AREA SQ. FT.: 16,934 ROOMS: 59 ACTIVITY STATIONS: 67

PRINCIPAL TENANTS: Students

FUNCTIONAL USE: Housing

SURVEY RESULTS: Modification not recommended in survey.

RECOMMENDATIONS: None

BUILDING: Moffat Hall NUMBER: 8019

CONSTRUCTED: 1962 AREA SQ. FT.: 24,288 ROOMS: 36 ACTIVITY STATIONS: 139

PRINCIPAL TENANTS: Students

FUNCTIONAL USE: Housing

SURVEY RESULTS: Modification not recommended in survey

RECOMMENDATIONS: None

BUILDING: Houtchens Hall NUMBER: 8020

CONSTRUCTED: 1962 AREA SQ. FT.: 22,404 ROOMS: 37 ACTIVITY STATIONS: 104

PRINCIPAL TENANTS: Students

FUNCTIONAL USE: Housing

SURVEY RESULTS:

Item	No.	Location	Description
Rest Rooms	14 & 15	Each apartment	Enlarge door opening to 32"
Handrails	14 & 15	Each apartment	Installed
Lavatory	14 & 15	Each apartment	Insulate pipes
Mirrors	14 & 15	Each apartment	Lower mirror over sink or install full-length
Parking	3 spaces	East side of building	Signs and remark

RECOMMENDATIONS:

2	Rest room modifications @ $2,100.00	$ 4,200.00	
3	Parking spaces - signed and remarked @ $50.00	150.00	
	SUB-TOTAL		$ 4,350.00

BUILDING: Girault Hall NUMBER: 8021

CONSTRUCTED: 1961 AREA SQ. FT.: 34,377 ROOMS: 118 ACTIVITY STATIONS: 200

PRINCIPAL TENANTS: Students

FUNCTIONAL USE: Housing

SURVEY RESULTS: Modification not recommended in survey.

RECOMMENDATIONS: None

BUILDING: Coronado Hall NUMBER: 8022
CONSTRUCTED: 1968 AREA SQ. FT.: 101,973 ROOMS: 631 ACTIVITY STATIONS: 464
PRINCIPAL TENANTS: Students
FUNCTIONAL USE: Housing

SURVEY RESULTS:

Item	No.	Location	Description
Drinking Fountain	3	1st floor hallway, B & C wing & lobby	Cup dispensers
Rest Rooms	4	One in A, B, C, D, wing, 1st floor	Private restrooms
Handrails	4	One in each of above rest rooms	Install
Lavatory	4	One in each of above rest rooms	Insulate pipes
Mirrors	4	One in each of above rest rooms	Lower
Public Telephone	4	One in each of above rest rooms	Lower
Parking	3 spaces	Northeast corner of College Center lot	Sign and remark.
Curb and/or Curb Cuts	1	Northeast corner of College Center lot	Curb cut in sidewalk

RECOMMENDATIONS:

3	Metal cup dispensers @ $4.00	$ 12.00	
4	Rest room modifications @ $2,100.00	8,400.00	
4	Public telephones to be lowered @ $125.00	500.00	
3	Parking spaces remarked and signed @ $50.00	150.00	
1	Curb cut in sidewalk @ $150.00	150.00	
	SUB-TOTAL		$ 9,212.00

BUILDING: Casa Del Sol & Faculty Quadruplex NUMBER: 8025
CONSTRUCTED: 1931 AREA SQ. FT.: 10,084 ROOMS: 5 Apt. ACTIVITY STATIONS: 13
PRINCIPAL TENANTS: Students and Faculty
FUNCTIONAL USE: Housing

SURVEY RESULTS: Modification not recommended in survey

RECOMMENDATIONS: None

EXHIBIT A

Architectural Barriers

VI. Accessibility of the Campus

The following buildings will remain inaccessible to the handicapped. Under each building is a statements as to why it will remain inaccessible.

1. Planetarium and Observatory

   Impossible to modify to meet standards due to prohibitive costs, and the fact that handicapped students have not taken Astronomy.
2. Rex Gymnasium

   Impossib-e to modify to meet standards due to prohibitive costs and it contains no programs that are not accessible in other buildings.
3. Communications Building

   Impossible to meet standards due to prohibitive costs for the value of the building. Programs can be secured in other building.
4. Electric Sub-Station

   Contains no educational programs.
5. Central Heating Plant

   Contains no educational programs
6. Motor Center

   Contains no educational programs
7. Maintenance and Warehouse

   Contains no educational programs
8. Pettys Hall

   Housing available in Houtchens and Coronado when modified.
9. Dalzell Hall

   Housing available in Houtchens and Coronado when modified.
10. Faculty Residence

    Not available for students
11. Faculty Residence

    Not available for students
12. Married Student Housing

    Housing available in Houtchens when modified
13. Crestone Courts

    Scheduled for removal
14. McCurry Hall

    Housing available in Houtchens and Coronado Hall when modified.
15. Savage Hall

    Housing available in Houtchens and Coronado Hall when modified.
16. Moffat Hall

    Housing available in Houtchens and Coronado Hall when modified.
17. Girault Hall

    Housing available in Houtchens and Coronado Hall when modified.
18. Casa Del Sol and Faculty Quadruplex

    Housing available in Houtchens and Coronado Hall when modified.
19. President's Home

    Not available for student use.

EXHIBIT A

Architectural Barriers

VII. Summary & Budget

Based upon the results of the survey and study, two alternatives are presented for the consideration of the C.C.H.E., Executive Budget Office, Joint Budget Committee, and the State Legislature. These alternatives are listed in priority ranking by Adams State College Officials.

1. The first alternative is to modify all twelve buildings which need to be modified in one project. They are as follows:

Industrial Arts & Science	$ 41,273.00
Planetarium & Observatory	4.00
Music	4,504.00
Leon Memorial	4,504.00
Education-Social Studies	4,212.00
Plachy Hall	4,533.00
Children's Speech & Hearing Clinic	3,454.00
Art Building	11,648.00
Learning Resource Center	32.00
College Center and Cafeteria	4,487.00
Houtchens Hall	4,350.00
Coronado Hall	9,212.00
TOTAL	$ 92,213.00

The budget for the above group is estimated as follows:

Architectural & Engineering	$ 9,221.00
Construction	92,213.00
Contingencies	2,766.00
TOTAL	$ 104,200.00

2. The second alternative is to divide into two projects. Project A - on which the demand use is the greatest - is as follows:

Industrial Arts & Science	$ 41,273.00
Education-Social Studies	4,212.00
Learning Resource Center	32.00
College Center & Cafeteria	4,487.00
Music	4,504.00
Houtchen's Hall	4,350.00
Coronado Hall	9,212.00
Art Building	11,648.00
TOTAL	$ 79,718.00

MESA COLLEGE

A summary of recommendations for making the Mesa College campus accesible to the handicapped is provided below. This plan will still leave several second floors inaccessible. However, careful attention to scheduling of classes, and special effort on the part of selected faculty and administrators will alleviate the need for installation of elevators in those buildings.

Student Center	$ 3,125
Physical Education Center (include elevator)	40,775
Walter-Walker Hall	6,175
Learning Resources Center	6,960
Houstan Hall	3,850
Wobben Hall	3,380
Vocational-Tech Building	1,250
Juniper Hall	1,850
Total Recommendation	$67,365

COLORADO COMMISSION ON HIGHER EDUCATION
Elimination of Architectural Barriers
Initial Survey

Please complete this survey form, retain a copy for your files, and return the original to: Dr. Jerome F. Wartgow, Assistant Director, Colorado Commission on Higher Education, 719 State Services Building, Denver, Colorado 80203.

The survey should be received by CCHE prior to the "Workshop on Elimination of Architectural Barriers," scheduled for March 11, 1974.

I. Name of Institution MESA COLLEGE
II. Chairman of Committee on Architectural Barriers William Branton
(or person completing this form)
III. Telephone 248 1214
IV. Estimated Number in each of the following categories currently at the institution:

	Students	Faculty and Staff
(a) Wheelchair Disabilities	0	0
(b) Ambulatory Disabilities (i.e. post polio, cerebial palsy, temporary ski injuries, etc.)	1 6 Temporary injuries	0
(c) Blindness	1	0
(d) Deafness	1	0
(e) Cardiac Problems	0	0
Total	9	-0-

V. Please list any programs offered by your institution that, to the best of your knowledge, are unique within the system of Public Higher Education in the State of Colorado. (i.e., B.S.-Veterinary Science; Ph.D.-Nursing; A.A.-Blacksmithing; etc.)

[illegible] A.A. - Travel and Recreation Management

B.A. - Human Services

[illegible] B.S. - Animal-Plant Management

B.S. - Environmental Geo-Science

CCHE 2/74

INSTITUTION: Mesa College

BUILDING: Student Center

PPINCIPAL TENANT: Student services

FUNTIONAL USE: Lounge area, TV rooms Banquet rooms and cafeteria.

SURVEY RESULTS:

The building is basically accessible and with minor modifications such as restrooms could be made accessible.

RECOMMENDATIONS:	JOB $
1. Adapt restroom facilities. (2) M&W (adapt less sinks and urinals)	$3,000
2. Lower public telephone	$125
TOTAL:	$3,125

INSTITUTION: Mesa College

BUILDING: Physical Education Center

PRINCIPAL TENANT: P.E. Department

FUNTIONAL USE: Basketball and recreation.

SURVEY RESULTS:

Access through the North door needs to be ramped 38 in. rise. The south entrance needs a handrail. The restrooms are accessible however, they are in the basement level and there is no way to get to them without an elevator.

RECOMMENDATIONS:

		JOB $
1.	Install ramp at North end 38 in. rise.	$3,800
2.	Install 30 feet of handrail south steps.	$450
3.	Lower public telephone	$125
4.	Adapt restrooms (2) M&W (mirror, insulation, towel disp.)	$400
5.	Install two stop elevator	$36,000
	TOTAL:	$40,775

INSTITUTION: Mesa College

BUILDING: Walter - Walker

PRINCIPAL TENANT: Performing and fine arts.

FUNTIONAL USE: Art classes and labs and theater.

SURVEY RESULTS:

Main entrance door is narrow. The restrooms are not accessible and the facilities within are not adapted.

RECOMMENDATIONS:

		JOB $
1.	Widen entrance door to 36 in.	$1500
2.	Widen entrance doors to restrooms (2)	$1,500
3.	Adapt restroom facilities (2) M&W (adapt less sinks and urinals)	$3,000
4.	Install cup dispenser at water fountain	$50
5.	Lower public telephone	$125
	TOTAL:	$6,175

INSTITUTION: Mesa College

BUILDING: Library

PRINCIPAL TENANT: Learning resource Center

FUNTIONAL USE: Study areas and Library.

SURVEY RESULTS:

A ramp exists at the back entrance but there is no handrail on the sloped sidewalk that leads to the ramp. The entrance doors to the restrooms are narrow and the facilities within are not accessible.

RECOMMENDATIONS:	JOB $
1. Install handrail 60 ft.	$960
2. Widen doors to restrooms (2) M&W	$3,000
3. Adapt restrooms inside (2) M&W	$3,000
TOTAL:	$6,960

INSTITUTION: Mesa College

BUILDING: Houstan Hall

PRINCIPAL TENANT: Old Main style building

FUNTIONAL USE: Language lab and classrooms.

SURVEY RESULTS:

Entrance doors are narrow and no accessible toilet facilities exist.

RECOMMENDATIONS:

		JOB $
1.	Widen entrance door.	$800
2.	Adapt toilet facilities (2) M&W (adapt less sinks and urinals)	$3,000
3.	Install cup dispenser at water fountain	$50
	TOTAL:	$3,850

INSTITUTION: Mesa College

BUILDING: Wobben Hall

PRINCIPAL TENANT: Science Department

FUNTIONAL USE: Classes and laborotories

SURVEY RESULTS:

There is a 4 in. step at the entrance and the door is narrow. The toilet facilities are not accessible.

RECOMMENDATIONS:

		JOB $
1.	Ramp 4 in. step at entrance.	$200
2.	Widen entrance door to 36 in.	$1,000
3.	Adapt restroom facilities (2) M&W (adapt less sinks and urinals)	$3,000
4.	Lower drinking fountain.	$180
	TOTAL:	$3,380

INSTITUTION: Mesa College

BUILDING: Vocational - Technical Building

PRINCIPAL TENANT: Vo - Tech Department.

FUNTIONAL USE: Classrooms and teaching labs.

SURVEY RESULTS:

A ramp exists at the entrance but there is no handrail present. There are no adequate toilet facilities in the building, that would be deemed 100% accessible. With nimor modifications this facility could be made accessible.

RECOMMENDATIONS:

		JOB $
1.	Install handrail at entrance 50 ft.	$800
2.	Adapt toilet facilities (2) M&W (mirror, insulation, towel disp. etc.)	$400
3.	Install cup dispenser at water fountain	$50
	TOTAL:	$1,250

INSTITUTION: Mesa College

BUILDING: Juniper Hall (Dorm tory)

PRINCIPAL TENANT: Women

FUNTIONAL USE: Womens dorm tory

SURVEY RESULTS:

Toilet facilities are not adequate in building, and shower facilities are not accessible.

RECOMMENDATIONS:

		JOB $
1.	Adapt toilet facilities (adapt less sinks and urinals)	$1,500
2.	Widen masonry wall to shower.	$300
3.	Install cup dispenser at fountain	$50
	TOTAL:	$1,850

METROPOLITAN STATE COLLEGE

Metropolitan State College is currently housed in all rental facilities. The Auraria campus will be totally accessible to the handicapped so no recommendations are made for Metropolitan State College.

Total Recommendation	$0

METROPOLITAN STATE COLLEGE
250 WEST FOURTEENTH AVENUE
DENVER COLORADO 80204

Office of the President

April 5, 1974

Dr. Jerome F. Wartgow
Assistant Director
Colorado Commission on Higher Education
719 State Services Building
Denver, Colorado 80228

Dear Dr. Wartgow:

Forwarded herewith is the building accessibility survey of facilities currently utilized by Metropolitan State College. Since all MSC facilities are rented properties, elimination of Architectural Barriers to the Handicapped poses a particular financial burden. This burden is further compounded since MSC is scheduled to move into new facilities in the fall of 1976 as a part of the Auraria Higher Education Center.

We are currently accomplishing certain "upgrading" of existing facilities to provide greater accessibility for handicapped students. These actions are primarily in the areas of:

1. Class schedules
2. Increasing entrance widths
3. Placement of drinking containers
4. Braille tapes in elevators, etc.

We are also developing an information program to make students, faculty, and staff, more aware of the problems of the handicapped and of the problems of the college within our current allocated resources and facilities. We have established an ad hoc Committee for the Removal of Architectural Barriers to the Handicapped to work with those responsible for planning the Auraria Higher Education Center. Mr. Frank L. Mills is chairman of the Committee. Please feel free to call Mr. Mills at 292-5190 ext. 240 on any matter pertaining to the work of the Committee.

Very truly yours,

James D. Palmer
James D. Palmer

JDP/cc
encl.

PHONE AREA CODE 303 292-5190

SOUTHERN COLORADO STATE COLLEGE

The Southern Colorado State College recommendations are divided into two portions, one for the Belmont Campus and the other for the Orman Campus. The Belmont Campus is clearly the highest priority of the two, with questions existing as to the economic feasibility of investing in extensive renovation to older buildings on the Orman Campus.

Recommendations for each campus, in order of priority, are as follows:

Belmont Campus

Library	$3,005
Administrative Building	580
Arts/Music	450
Life Science	775
Physics/Math	1,890
Chemistry Building	9,005
HPER Recreation Center	500
Ramp from Student Center to Library	6,000
Residence Hall	1,900
Total Recommendations (Belmont Campus)	$24,105

Orman Campus

Applied Science & Technology	$ 5,000
College Student Center	4,980
Arts & Gymnasium	4,200
Business Building (includes elevator)	45,200
Total Recommendation*	$59,380

*If all recommendations listed here were implemented there would still be significant areas on the campus that would remain inaccessible and would be economically/architecturally infeasible to renovate. However, the renovations suggested would provide accessibility to the major portion of instructional programs offered at Orman.

COLORADO COMMISSION ON HIGHER EDUCATION
Elimination of Architectural Barriers
Initial Survey

Please complete this survey form, retain a copy for your files, and return the original to: Dr. Jerome F. Wartgow, Assistant Director, Colorado Commission on Higher Education, 719 State Services Building, Denver, Colorado 80203.

The survey should be received by CCHE prior to the "Workshop on Elimination of Architectural Barriers," scheduled for March 11, 1974.

I. Name of Institution Southern Colorado State College
II. Chairman of Committee on Architectural Barriers Mr. Wayne McMurtry
(or person completing this form)
III. Telephone 549-2211
IV. Estimated Number in each of the following categories currently at the institution:

	Students	Faculty and Staff
(a) Wheelchair Disabilities	13	
(b) Ambulatory Disabilities (i.e. post polio, cerebial palsy, temporary ski injuries, etc.)	8	
(c) Blindness		
(d) Deafness		
(e) Cardiac Problems	2	
Total	23	

V. Please list any programs offered by your institution that, to the best of your knowledge, are unique within the system of Public Higher Education in the State of Colorado. (i.e., B.S.-Veterinary Science; Ph.D.-Nursing; A.A.-Blacksmithing; etc.)

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SCSC has numerous programs relating to our thrust of career preparation. Several of these programs are unique; a prime example would be Auto Parts Merchandising which has two and four-year programs.

INSTITUTION: Southern Colorado State College (Belmont)

BUILDING: Administration

PRINCIPAL TENANT: Administration services

FUNTIONAL USE: offices

SURVEY RESULTS:

Restrooms need minor modifications and the elevator needs to be marked for the blind.

RECOMMENDATIONS:

		JOB $
1.	Adapt restrooms (2) M&W (mirrors, insulation, towel disp. etc.)	$400
2.	Mark elevator with braille markings	$5
3.	Lower telephone in lobby	$125
4.	Install cup dispenser at fountain	$50
	TOTAL:	$580

INSTITUTION: Southern Colorado State College (Belmont)

BUILDING: Arts/Music

PRINCIPAL TENANT: Art and Music Department

FUNTIONAL USE: Classrooms

SURVEY RESULTS:

Restrooms need minor modifications.

RECOMMENDATIONS:	JOB $
1. Adapt restrooms (2) M&W (mirror, insulation, towel disp, etc.)	$400
2. Install cup dispenser at fountain	$50
TOTAL:	$450

INSTITUTION: Southern Colorado State College (Belmont)

BUILDING: Life Science Building

PRINCIPAL TENANT: Science Departments

FUNTIONAL USE: Classrooms and labs.

SURVEY RESULTS:

Ramp to building needs 20 ft. of handrail. Restrooms need minor modifications.

RECOMMENDATIONS:

		JOB $
1.	Install handrail on ramp 20 ft.	$320
2.	Adapt restrooms (2) M&W (mirror, insulation, towel disp. etc.)	$400
3.	Braille mark elevator	$5
4.	Install cup dispenser at fountain	$50
	TOTAL:	$775

INSTITUTION: Southern Colorado State College (Belmont)

BUILDING: Library

PRINCIPAL TENANT: Learning Resource Center

FUNTIONAL USE: Library

SURVEY RESULTS:

No restroom facilities exist for the handicapped in the building.

RECOMMENDATIONS:

		JOB $
1.	Adapt restrooms (2) M&W (adapt less sinks and urinals)	$3,000
2.	Mark elevator with braille markings	$5
	TOTAL:	$3,005

INSTITUTION: Southern Colorado State College (Belmont)

BUILDING: Physics/Math

PRINCIPAL TENANT: Physics and Math Department

FUNTIONAL USE: Classrooms and labs

SURVEY RESULTS:

A ramp exists but it needs a handrail and the restrooms need minor modifications.

RECOMMENDATIONS:

		JOB $
1.	Install handrail on ramp 90 ft.	$1,440
2.	Adapt restrooms (2) M&W (mirror, insulation, towel disp. etc.)	$400
3.	Install cup dispenser at fountain	$50
	TOTAL:	$1,890

INSTITUTION: Southern Colorado State College (Belmont)

BUILDING: Chemistry Building

PPINCIPAL TENANT: Chemistry Department

FUNTIONAL USE: Classrooms and labs

SURVEY RESULTS:

There is an existing ramp that leads to this building that is too steep and the restrooms need to be totally adapted.

RECOMMENDATIONS:

		JOB $
1.	Rebuild existing ramp 60in. rise	$6,000
2.	Adapt restrooms (2) M&W (adapt less sinks and urinals)	$3,000
3.	Install braille markings in elevator	$5
	TOTAL:	$9,005

INSTITUTION: Southern Colorado State College (Belmont)

BUILDING: H.P.E.R. Recreation Center

PRINCIPAL TENANT: P.E. Department

FUNTIONAL USE: Recreation

SURVEY RESULTS:

Restrooms need minor modifications and the showers need to be made accessible.

RECOMMENDATIONS:

		JOB $
1.	Adapt Restrooms (2) M&W (mirror, insulation, towel disp. etc.)	$400
2.	Remove lip from shower stall	$100
	TOTAL:	$500

INSTITUTION: Southern Colorado State College (Belmont)

BUILDING: Student Center (presently under construction)

PRINCIPAL TENANT: Student Services

FUNTIONAL USE: Book store and general student use

SURVEY RESULTS:

Recommendations made and change orders being issued.

Existing ramp to library is too steep and should be replaced by one that has a 1 in 12 slope 60 in. rise.

RECOMMENDATIONS:

	JOB $
1. NONE	$ -0-
2. Ramp from Student Center to Library is too steep 60 in. rise replace this ramp.	$6,000

INSTITUTION: Southern Colorado State College (Belmont)

BUILDING: Residence Hall

PRINCIPAL TENANT: Students

FUNTIONAL USE: Dormatory

SURVEY RESULTS:

Adapt restroom facilities in mens wing and make minor adjustments in the womens wing.

RECOMMENDATIONS:

		JOB $
1.	Adapt mens restroom (adapt less sinks and urinals)	$1,500
2.	Adapt womens restroom (adapt shower with seat and bars and towel disp. mirror, and insulation)	$400
	TOTAL:	$1,900

INSTITUTION: Southern Colorado State College (Orman)

BUILDING: Applied Science and Technology

PPINCIPAL TENANT: Vocational tech. Department

FUNTIONAL USE: Shops, classrooms and offices

SURVEY RESULTS:

A six in step exists at the main entrance and no adequate restroom facilities are present. Entrance doors to restrooms are too narrow.

RECOMMENDATIONS:

		JOB $
1.	Ramp 6 in. step at entrance.	$600
2.	Widen restroom doors (2)	$1,400
3.	Adapt restroom facilities (2) M&W (adapt less sinks and urinals)	$3,000
	TOTAL:	$5,000

INSTITUTION: Southern Colorado State College (Orman)

BUILDING: College Student Center

PRINCIPAL TENANT: Bookstore, Theater and Cafeteria

FUNTIONAL USE: Entertainment and lounges.

SURVEY RESULTS:

The building is accessible from two levels. The lower level requires a ramp for a 6 in. step. The upper level would require ramping a 12 in. step. The restrooms are inadequate and can only be made accessible by an elevator or the removal of a wall that was installed to facilitate a storage room for the cafeteria.

RECOMMENDATIONS:

		JOB $
1.	Ramp 6 in. step at lower level.	$600
2.	Ramp upper level step 12 in.	$1,200
3.	Lower drinking fountain	$180
4.	Adapt restrooms first floor (2) M&W (adapt less sinks and urinals)	$3,000
5.	An elevator exists that services the stage in the theater and the kitchen. This elevator should be put in working order to make restrooms accessible.	$ -0-
	TOTAL:	$4,980

INSTITUTION: Southern Colorado State College (Orman)

BUILDING: Arts and Gym

PRINCIPAL TENANT: Business office and gymnasium

FUNTIONAL USE: Wood shops, business machines room classrooms.

SURVEY RESULTS:

The first floor is inaccessible and the third floor which houses only one room is also inaccessible. The only possible entrance to the building is on the back side and a 12 in. step leads in. No adequate toilet facilities exist in the building.

RECOMMENDATIONS:

		JOB $
1.	Ramp 12 in. step on back side	$1,200
2.	Adapt restroom facilities (2) M&W (adapt less sinks and urinals)	$3,000
	TOTAL:	$4,200

INSTITUTION: Southern Colorado State College (Orman)

BUILDING: Business Building

PRINCIPAL TENANT: Business Education Department

FUNTIONAL USE: Offices. and classrooms.

SURVEY RESULTS:

A rise of 24 inches exists inside the door to get to the level of the first floor. There are no restrooms that are adapted for the handicapped and there is no vertical transportation to give access to the second floor or basement level.

RECOMMENDATIONS:

		JOB $
1.	Work out interior ramp 24 in. or install lift.	$4,200
2.	Adapt restroom facilities (2) M&W (adapt less sinks and urinals)	$3,000
3.	Install elevator	$38,000
	TOTAL:	$45,200

WESTERN STATE COLLEGE

The natural terrain and climate in which Western State College is situated, make it infeasible to provide total accessibility to the handicapped while maintaining the architectural integrity and physical master plans of the campus.

Therefore, it is the Task Force's opinion, that state funds could more appropriately be invested in other campuses in the state. No "unique" programs are offered at Western State College that Colorado students could not take advantage of at another public, accessible institution in the state.

However, it remains possible and highly desirable to make certain facilities which are highly used by the community, accessible. Implementation of these recommendations will not provide accessibility to all educational programs on the campus, but will maintain the role of the college as a cultural and social activity center for the community.

Taylor Hall & Auditorium (includes elevator)	$37,095
Gymnasium	3,405
College Student Union	4,705
Total Recommendation	$45,205

COLORADO COMMISSION ON HIGHER EDUCATION
Elimination of Architectural Barriers
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The survey should be received by CCHE prior to the "Workshop on Elimination of Architectural Barriers," scheduled for March 11, 1974.

I. Name of Institution Western State College
II. Chairman of Committee on Architectural Barriers H. J. Dorricott
(or person completing this form)
III. Telephone 943-2186
IV. Estimated Number in each of the following categories currently at the institution:

	Students	Faculty and Staff
(a) Wheelchair Disabilities	-0-	-0-
(b) Ambulatory Disabilities (i.e. post polio, cerebial palsy, temporary ski injuries, etc.)	25	2
(c) Blindness	-0-	-0-
(d) Deafness	-0-	-0-
(e) Cardiac Problems	1	-0-
Total	26	2

V. Please list any programs offered by your institution that, to the best of your knowledge, are unique within the system of Public Higher Education in the State of Colorado. (i.e., B.S.-Veterinary Science; Ph.D.-Nursing; A.A.-Blacksmithing; etc.)

None

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INSTITUTION: Western State

BUILDING: Taylor

PRINCIPAL TENANT: Administration

FUNTIONAL USE: Administration offices and classrooms.
This building also houses the auditorium.

SURVEY RESULTS:

The building is a three level steped building built at three different periods therefor for accessibility to be accomplished access would have to be made through two different doors. There are no adequate toilet facilities and entrance doors are narrow.

RECOMMENDATIONS:

		JOB $
1.	Ramp 32 in. rise to entrance #2 Area requires heating elements in ramp	$4,248
2.	Install wider doors at entrance #1&2	$1,000
3.	Handrails for existing interior ramps (floors 1,2 & 3.)	$672
4.	Adapt toilet facilities. (2) M&W (adapt less sinks and urinals)	$3,000
5.	Add side bubbler to water fountain	$175
6.	Install two (2) stop elevator in existing shaft.	$28,000
	TOTAL:	$37,095

INSTITUTION: Western State

BUILDING: Gymnasium

PRINCIPAL TENANT: Physical education department

FUNTIONAL USE: Basketball courts, swimming pool and locker rooms.

SURVEY RESULTS:

There is a 2 in. step giving access to the pool, the rest rooms need to be adapted.

RECOMMENDATIONS:

		JOB $
1.	Ramp 2 in. step (asphalt mix)	$100
2.	Adapt restrooms (2) M&W (adapt less sinks and urinals)	$3,000
3.	Lower drinking fountain	$180
4.	Lower telephone	$125
	TOTAL:	$3,405

INSTITUTION: Western State

BUILDING: College Student Union

PRINCIPAL TENANT: Student Services

FUNTIONAL USE: Games area, cafeteria and lounge, and book store.

SURVEY RESULTS:

The entrance doors are narrow and there are no toilet facilities accessible to the handicapped.

RECOMMENDATIONS:		JOB $
1.	Enlarge entrance doors to both restrooms to 36 in.	$1,400
2.	Adapt toilet facilities. (2) M&W (adapt less sinks and urinals)	$3,000
3.	Lower drinking fountain.	$180
4.	Lower telephone	$125
	TOTAL:	$4,705

ARAPAHOE COMMUNITY COLLEGE

Arapahoe Community College is in the process of occupying a new facility which will accomodate the large majority of its instructional programs. The Task Force met with college administrators and planners to review and make recommendations of plans during construction. Costs of eliminating barriers in the new facility were included in construction costs, and the facility will be totally accessible when occupied

Minor modifications to the three remaining temporary campus buildings will be undertaken by the physical plant department to provide minimal accessibility until the buildings are replaced.

Recommendation $0

COMMUNITY COLLEGE OF DENVER - AURARIA CAMPUS

Plans for providing accessibility for the Auraria Campus of CCD are included within the Auraria program plan cited earlier in this report.

Recommendation	$0

COLORADO COMMISSION ON HIGHER EDUCATION

Elimination of Architectural Barriers
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The survey should be received by CCHE prior to the "Workshop on Elimination of Architectural Barriers," scheduled for March 11, 1974.

I. Name of Institution Community College of Denver - All Campuses
II. Chairman of Committee on Architectural Barriers Ted Guttadore
(or person completing this form)
III. Telephone 287-3311 Ext. 241
IV. Estimated Number in each of the following categories currently at the institution:

	Approximate Students	Faculty and Staff
(a) Wheelchair Disabilities	28	1
(b) Ambulatory Disabilities (i.e. post polio, cerebial palsy, temporary ski injuries, etc.) Muscullar Dystrophy, Multiple Sclerosis, etc.	263	2
(c) Blindness	15	
(d) Deafness	35	1
(e) Cardiac Problems	35	3
Total	376 *	9

V. Please list any programs offered by your institution that, to the best of your knowledge, are unique within the system of Public Higher Education in the State of Colorado. (i.e., B.S.-Veterinary Science; Ph.D.-Nursing; A.A.-Blacksmithing; etc.)

Associate Degree Programs in Urban Horticulture, International Secretarial Science, Interpreter/Tutor for the Deaf, Inhalation Therapy Technology and several others.

CCHE 2/74

* NOTE: This is the count of students who declared themselves to be handicapped on the college application form. It does not include those who did not choose to identify themselves in that manner. The Center for the Physically Disadvantaged has at least 70 students who have sought service from the CENTER but asked that their handicapping condition not be made a matter of record.

COMMUNITY COLLEGE OF DENVER - NORTH CAMPUS

The Task Force met with the officers of the Center for the Physically Disadvantaged at the North Campus and reviewed plans which insure total accessiblity at the new campus which is currently in physical planning stages.

All current facilities are temporary, and as the campus already serves a large number of handicapped students, many improvements have already been made to the existing campus. Those minor modifications which are necessary between Fall of 1974 and date of occupancy of the new building will be made out of the campus operating budget.

Recommendation	$0

COMMUNITY COLLEGE OF DENVER - RED ROCKS

The following recommendations will complete the program to make the Red Rocks campus completely accessible to the physically handicapped student.

East Building	$13,485
West Building	1,000
T-1	125
Total Recommendation	$14,610

NEEDS ASSESSMENT

The Red Rocks Campus presently has approximately 2.6%[1] or about 92 declared [2] handicapped students on its campus. To attempt a projection as to how many handicapped students could be expected to attend Red Rocks, if clear of barriers, would be extremely difficult. Projecting a compromise 5% increase would indicate about 97 to 100 could be expected.

Preliminary estimates indicate the following percentage breakdown[3]:

a.	Deaf and hearing impaired	17%	-	17[4]
b.	Blind and visually impaired	10%	-	10
c.	Other: spinal, cerebral palsy, multiple sclerosis, amputations, etc.	60%	-	60
d.	Related service: support programs, braille, recording and transcription	13%	-	13
	Estimated total			100

---

[1] Statistical information taken from Handicapped Program Plan, 1974.

[2] The number of handicapped students who registered but did not choose to identify themselves on the application form as "handicapped" has not been determined.

[3] Handicapped Program Plan, 1974.

[4] Applied percentage to projected enrollment.

IDENTIFICATION OF UNIQUE PROGRAMS

In fairness to the total occupational program, we would suggest that all programs are unique. Each is capable of relating to the handicapped; however, in keeping with the basic concept of exposing the total course offerings to the handicapped, none are unique.

RESULTS OF CAMPUS SURVEY

The actual surveys entered as appendix A and appendix B indicate several items that need immediate attention to assure accessibility to both the east and west buildings.

Drinking fountains will need to be provided at the proper height. It is recommended that at least three be provided. The west end rest room in the east building has an entrance problem with the doors. This entrance needs evaluation and remedy. The entrance to Business and Management is located near a corner and imposes collision hardships; perhaps, a convex mirror could be appropriately placed to insure greater safety. The east entrance to the east building is generally discouraging for the handicapped. Parking presently is located at that end of the building while the electiic door is located at the south entrance. The walkway from parking to the east door is quite lengthy and creates a fatique factor, especially for the crutch users. Generally, the signing identification system is inadequate or totally lacking. Appendix C indicates the suggested location for proper informational graphics.

DETAILED BUILDING ANALYSIS

The Red Rocks Campus was completed in 1974, thus our existing buildings all fall into a priority one category. The temporary buildings are due to be phased out at the completion of phase 1B, which is fall 1976.

BUILDING: East (0001)

CONSTRUCTED: 1972, 1973, 1974 Area Sq. Ft.: 69,471

ROOMS: 162 Activity Stations: 1,708

PRINCIPAL TENANT: Classrooms/Offices/Science/Math/LMC/Media/Business Education/Drafting

FUNCTIONAL USE: Classrooms and Labs

SURVEY RESULTS:

Rest room door arrangement makes wheel chair access difficult. Blind corner at Business Management area. Parking exists at the east end of building while electric door is at south of building. Routing signs are needed externally. Water fountains are too high. Inadequate parking facilities.

RECOMMENDATIONS:

1.	Replace east door with electrically operated door.	1 @ $3400	$3,400
2.	Provide twenty parking stalls at south entrance.	20 @ $260 ea.	5,200
3.	Retrofit a minimum of three drinking fountains.	3 @ $875 ea.	2,625
4.	Provide convex mirror at corner of Business & Management.		60
5.	Provide routing signs externally as described in Appendix D	5 @ $20 ea.	100
6.	System for vehicle identification of handicapped.	Decal	-
7.	Modify rest room in west end of east building.		2,100
		Total	$13,485

BUILDING: West (0002)

CONSTRUCTED: 1972,11973, 1974 Area Sq. Ft.: 33,376

ROOMS: 53 Activity Stations: 338

PRINCIPAL TENANT: Occupational Shops/Classrooms

FUNCTIONAL USE: Labs and Classrooms

SURVEY RESULTS:

Drinking fountains too high. Lack of rest room facilities on first floor. Steps are only access to second level, 16 in number, 7 1/2" risers with 1 1/2" lip. The railing is 33 inches. Rest room facilities will be available upon completion of phase 1B.

RECOMMENDATIONS:

1. Provide drinking facilities on level one.		
	1 @ $875 ea.	$875
2. Provide telephone (public).		125
	Total	$1000

BUILDING: T-1 (NW - 0007)

CONSTRUCTED: Area Sq. Ft.: 1,440

ROOMS: 1

PRINCIPAL TENANT: Student Government

FUNCTIONAL USE: Student Service

SURVEY RESULTS:

All grades are in excess of 5%. These buildings will phase out with the completion of phase 1B. Modify pay phone.

RECOMMENDATIONS:

1. Modification of pay phone.	$125
Total	$125

SUMMARY AND BUDGET

Budget Recapitulation

Automatic doors (1)		3,400
Parking (20)		5,200
Drinking fountains (4)		3,500
Convex mirror (1)		60
Routing signs (5)		100
Restroom modification (1)		2,100
Pay phone modifications (2)		250
	Sub Total	$ 14,610
Design fee (10%)		1,461
Contingency (5% of 16,363)		818
Escalation (12%)		1,753
	Total	$ 18,642

EL PASO COMMUNITY COLLEGE

The Task Force met with officials of EPCC and reviewed the planning process for the new Fort Carson campus. Provisions have been made to insure that the new facility will be free of architectural barriers.

The current rented facilities are minimally accessible and no recommendaions for improvements are offered.

Recommendation	$0

COLORADO COMMISSION ON HIGHER EDUCATION
Elimination of Architectural Barriers
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The survey should be received by CCHE prior to the "Workshop on Elimination of Architectural Barriers," scheduled for March 11, 1974.

I. Name of Institution EL PASO COMMUNITY COLLEGE
II. Chairman of Committee on Architectural Barriers John H. Scheufler (Temporary)
(or person completing this form)
III. Telephone (303) 471-7546
IV. Estimated Number in each of the following categories currently at the institution:

	Students	Faculty and Staff ***
(a) Wheelchair Disabilities	*	
(b) Ambulatory Disabilities (i.e. post polio, cerebial palsy, temporary ski injuries, etc.)	*	
(c) Blindness	*	
(d) Deafness	*	
(e) Cardiac Problems	*	
Total		

** V. Please list any programs offered by your institution that, to the best of your knowledge, are unique within the system of Public Higher Education in the State of Colorado. (i.e., B.S.-Veterinary Science; Ph.D.-Nursing; A.A.-Blacksmithing; etc.)

CCHE 2/74

* The only current numeric break down of handicapped students at EPCC is shown as follows:

```
        Physically:  99 students)  DERIVED FROM THE STUDENTS THEMSELVES.
Mental-Emotional:  20 students)
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** 1. Occasionally we have students from the Colorado School for the deaf and blind (both deaf & blind) who take various courses, including Machine Shop, for the blind. We expect these numbers to increase, especially in light of the new state laws regarding educating the handicapped.

2. We do offer courses in Farrier Science (Blacksmithing).
3. Courses have been offered for the deaf in Hand Sign language.
4. We have both an LPN and ADN Nursing program and Dental Assistant program.

*** 5. Approximately 10-20 faculty have a limiting physical disability.

LAMAR COMMUNITY COLLEGE

Implementation of the recommendations summarized below will eliminate barriers to the handicapped in the basic campus facilities that house the instructional programs. While certain services and areas of the campus will remain inaccessible, the minimal modifications recommended here will provide access to the "unique" programs offered by Lamar Community College.

	Lamar CC Request	CCHE Recommendation
Bowman Building	$ 4,975	$4,975
Trustees Building	4,885	710
Betz Building	7,780	580
Parking & Curb Cuts	900	900
Total Recommendation	$18,540	$7,165

COLORADO COMMISSION ON HIGHER EDUCATION
Elimination of Architectural Barriers
Initial Survey

Please complete this survey form, retain a copy for your files, and return the original to: Dr. Jerome F. Wartgow, Assistant Director, Colorado Commission on Higher Education, 719 State Services Building, Denver, Colorado 80203.

The survey should be received by CCHE prior to the "Workshop on Elimination of Architectural Barriers," scheduled for March 11, 1974.

I. Name of Institution Lamar Community College
II. Chairman of Committee on Architectural Barriers Dr. Henderson
(or person completing this form)
III. Telephone (303) 336-2248 ext. 47
IV. Estimated Number in each of the following categories currently at the institution:

	Students	Faculty and Staff
(a) Wheelchair Disabilities	1	
(b) Ambulatory Disabilities (i.e. post polio, cerebral palsy, temporary ski injuries, etc.)	1	1
(c) Blindness	2	
(d) Deafness	1	
(e) Cardiac Problems	0	
Total	5	1

V. Please list any programs offered by your institution that, to the best of your knowledge, are unique within the system of Public Higher Education in the State of Colorado. (i.e., B.S.-Veterinary Science; Ph.D.-Nursing; A.A.-Blacksmithing; etc.)

CCHE 2/74

PROGRAM PLAN FOR THE REMOVAL OF ARCHITECTURAL BARRIERS TO THE HANDICAPPED

I. INTRODUCTION

Lamar Community College has a relatively new campus with modern, well-equipped buildings. All the buildings are new since 1965. Some work in removing barriers has already been done but more needs to be done to make the campus feasibly accessible to the handicapped for all educational programs offered.

It is the goal of the college to remove all barriers considered feasible, as soon as possible, hopefully within the next two years.

II. NEEDS ASSESSMENT

At the present time the college has six persons identified as having physical handicaps and it is estimated that at least three times this number would be attending the college if all architectural barriers were removed. See Appendix A.

III. IDENTIFICATION OF UNIQUE PROGRAMS

The college is offering three unique programs at the present time. These programs are the following:

1. Auctioneering
2. Horse Training and Management
3. Mass Media Specialist

A. Auctioneering

The Auctioneering Program is a one-year vocational-technical program leading to a certificate for immediate job-entry after completing the program. Courses in business, communication and auctioneering are required for completing the program and students must be able to attend classes in the following buildings:

1. Building B* - Bowman Building
2. Building D* - Betz Building

B Horse Training and Management

The Horse Training and Management Program is a two-year program leading to a certificate for immediate job entry upon completion the program. Courses in business, communication, agriculture and horse training are required for completing the program and students must be able to use the following buildings:

1. Building B* - Bowman Building
2. Building C* - Science (Trustees) Building
3. Building D* - Betz Building

C Mass Media Specialist

The Mass Media Specialist Program is a two-year program leading to a certificate for immediate job entry, upon completion. Courses in business, communications, and journalism are required for completion of the program and students must be able to use the following buildings:

1. Building B* - Bowman Building
2. Building D* - Betz Building

*See Appendix B.

IV. RESULTS OF CAMPUS SURVEY (See Appendix C.)

A. Building A - Student Living Facility (Dormitory)

It is recommended that barriers in and to the building be removed as follows:

1. Toilet and Shower Rooms:
    a. lower two mirrors
    b. install two fold-down shower seats
    c. change one door to swing out
2. Drinking Fountains:
    a. lower one drinking fountain
3. Entrance to Building:
    a. build ramp to entrance at west side

B. Building B - Bowman Building (Library and Classroom Building)

It is recommended that barriers in and to the building be removed as follows:

1. Entrance:
    a. ramp at entrance - north side
    b. install 36 inch door at entrance.
    c. sidewalk from parking lot
2. Restrooms (both men's and women's).
    a. towel dispenser - two rooms
    b. mirror - two rooms
    c. shelf - two rooms
    d. remove interior door at entrance - two rooms
3. Telephone:
    a. lower pay phone
4. Drinking Fountain:
    a. install side bubbler or cup dispenser

C. Building C - Science Building-Trustees

It is recommended that barriers in and to the building be removed as follows:

1. Entrance:
    a. change slope of present ramp to meet specifications
2. Rest Rooms (both men's and women's)
    a. lower mirror - two rooms
    b. towel dispenser - two rooms
    c. insulate water pipes - two rooms
    d. install shelf - two rooms
3. Elevator:
    a. label buttons in braille
4. Telephone:
    a. lower pay phone

5. Drinking Fountain:

    a. lower drinking fountain

D. Building D - Betz Building (Area Vocational School)

It is recommended that barriers in and to the building be removed as follows:

1. Entrance:

    a. entrance ramp at west end.

    b. sidewalk for easy entrance on west side

2. Rest Rooms (both men's and women's)

    a. towel dispenser - two rooms

    b. shelf - two rooms

    c. mirros - two rooms

    d. insulate water pipes - two rooms

3. Drinking Fountain

    a. lower drinking fountain

V. DETAILED BUILDING ANALYSIS

Four buildings need modifications to remove architectural barriers in priority order, as follows:

1st Priority - Building B** Bowman Building (Library and Classroom Building)

2nd Priority - Building C** Trustees Building (Science Building)

3rd Priority - Building D** Betz Building (Area Vocational Building)

4th Priority - Building A** Dormitory Building (Student Living Facilities)

**See Appendix B for map of campus.

BUILDING: BOMAN***

Constructed: 1968 - Area, square feet, 32,676

Rooms: 19 Activity Station: 819

Principal Tenant: Liberal Arts

Functional Use: Classrooms, teaching laboratories, and library.

SURVEY RESULTS:

The Survey revealed inadequate entrance because of two steps and a 30" door on the north entrance. The south entrance may be made accessible with a long sidewalk from the parking lot. The west entrance is inaccessible because of a full flight of stairs. With ramp, sidewalks and door width modification the ground floor would be accessible.

The pay telephone is too high from the floor as is the drinking fountain. The rest rooms are inadequate.

RECOMMENDATIONS:

1.	Install ramp at north door - 28 inch rise	$2800.00
2.	Install 36 inch door to replace 30 inch door	1500.00
3.	Lower Pay Telephone	100.00
4.	Add side bubbler or cup dispenser on one floor	175.00
5.	Install bathroom fixture in men's and women's rooms:	400.00
	Towel Dispenser	
	Mirror	
	Shelf	
	Insulate Pipes	
	TOTAL	$4975.00

BUILDING: TRUSTEE***

Constructed: 1971 - Area, square feet, 26, 646

Rooms: 8 Activity Station: 235

Principal Tenant: Liberal Arts

Functional Use: Laboratories

The entrance ramp to the ground floor of the building has approximately a 12% slope and the elevator to the basement and the second floor doesn't have braille markings on the controls. The pay telephone is too high off the floor as is the drinking fountain. The rest rooms do not have adequate mirror, towel dispenser, shelf or insulation on the pipes.

RECOMMENDATIONS:

1.	Lower fountain main hall	$ 180.00
2.	Lower mirror, towel dispenser, insulate pipes under laboratories, and install shelf in one each men's and women's rest rooms	400.00
3.	Label elevator buttons in braille	5.00
4.	Lower pay phone	100.00
5.	Rebuild ramps to meet specifications	4200.00
	TOTAL	$4885.00

BUILDING: Betz***

Constructed: 1969 - Area square feet, 30,000

Rooms: 14 Activity Station: 375

Principal Tenant: Vocational Department

Functional Use: Classrooms and teaching laboratories

SURVEY RESULTS:

The entrance ramps are at an approximate 10% grade, not meeting specifications. The drinking fountains are too high off the floor. Also, both the men's and women's rest rooms are not adequate.

RECOMMENDATIONS:

1.	Reconstruct entrance ramps or build sidewalk and ramp to west and east entrance	$7200.00
2.	Install mirrors, towel dispenser, shelf and insulate pipes	400.00
3.	Lower drinking fountain	180.00
	TOTAL	$7780.00

BUILDING: Dormitory-Cafeteria Complex***

Constructed: 1965 - Area square feet: 51,000

Rooms: 102 Activity Stations: 204

Principal Tenant: College Students

Functional Use: Living quarters and cafeteria

SURVEY RESULTS:

The rest rooms and shower rooms are not adequate. Entrance to the building is not possible without modifications. Also, the drinking fountain is too high off the floor.

RECOMMENDATIONS:

1. Ramp to entrance (west side)	$ 600.00
2. Rest Rooms	
a. Modify 2 stall doors to swing out	175.00
b. Lower mirror and dispenser and shelf	400.00
c. floor cut on a 2 inch step up	400.00
3. Install fold down shower seat - 2 showers	400.00
4. Lower Drinking Fountain	180.00
5. Lower Pay Telephone	100.00
TOTAL	$2100.00

***See Appendix B and C.

VI. ACCESSIBILITY OF THE CAMPUS

Upon completion of the plan, the areas that will remain inaccessible to the handicapped because of architectural barriers are as follows:

1. Second floor of Bowman Building
2. Second floor of Dormitory.
3. Administrative Wing of the Bowman Building.

SECOND FLOOR OF BOWMAN BUILDING:

The cost/benefit ratio is prohibitive for making the second floor accessible. Since the building has two floors, those classes in which handicapped students are enrolled can be scheduled or moved to the first floor.

SECOND FLOOR OF DORMITORY:

All handicapped students can be housed on the first floor making it unnecessary for them to have access to the second floor.

ADMINISTRATIVE WING OF THE BOWMAN BUILDING:

Since the handicapped student would have need to enter this building only three or possibly four times each year, (only at class registration for each quarter), it is cost/benefit prohibitive. The administrators whose offices are in the building have indicated that they will go to the student rather than have the handicapped student go to them.

VII. SUMMARY AND BUDGET:

The plan will make the first floor of the Bowman Building and Dormitory accessible as well as all of the Betz Building and Trustees Building to the physically handicapped person. Implementation of the plan will leave no program inaccessible to any student because classes can be scheduled in accessible areas and business and other matters can be taken to the student rather than the student going to the administrative offices. The program can be implemented on a total of $19,740.

INSTITUTION: Lamar Community College

BUILDING: Bowman Building

PRINCIPAL TENANT: Book Store and Arts & Sciences

FUNTIONAL USE: Classroom and Student book store.

SURVEY RESULTS:

A 28 inch rise of steps exists at the entrance and the doorway is a narrow 28 inches. The restrooms with minor modification can be adapted.

RECOMMENDATIONS:		JOB $
1.	Ramp 28 in. rise at entrance.	$2,800
2.	Replace entrance door with 36 in. door	$1,500
3.	Lower pay phone in lobby	$100
4.	Add side bubbler to fountain	$175
5.	Adapt public restrooms (2) M&W Mirror, insulation, towel Disp.	$400
	TOTAL:	$4,975

INSTITUTION: Lamar Community College

BUILDING: Trustees Building

PRINCIPAL TENANT: Beautician shcool, student center

FUNTIONAL USE: Classrooms, Student Center and Beautician School.

SURVEY RESULTS:

The entrance already has a ramp at about a one in ten rise. There are no toilet facilities for the disabled and the elevator is not adequately labeled for the blind.

RECOMMENDATIONS:

		JOB $
1.	Lower drinking fountain, first floor	$180
2.	Modify public restrooms (2) M&W Mirror, insulation, towel Disp.	$400
3.	Provide accessible telephone (lower)	$125
4.	Braille label elevator	$5
	TOTAL:	$710

INSTITUTION: Lamar Community College

BUILDING: Betz Vocational

PRINCIPAL TENANT: School of Vocational Studies

FUNTIONAL USE: Auto Mechanics, electronics, and woodcraft

SURVEY RESULTS:

A ramp exists at the entrance of the building and with minor adaptions the building would be accessible.

RECOMMENDATIONS:

		JOB $
1.	Lower fountain in main hall.	$180
2.	Adapt restrooms (2) M&W Mirror, Insulation, Towel Disp.	$400
	TOTAL:	$580

MORGAN COUNTY COMMUNITY COLLEGE

e nature of the programs, facilities and methods of delivering
Morgan County Community College, it is recommended that no funds
removal of architectural barriers to the handicapped at this

ecommendation $0

OTERO JUNIOR COLLEGE

The program plan for removal of architectural barriers at Otero Junior College, when implemented as summarized below, will eliminate architectural barriers and provide accessibility to all instructional programs offered by the College.

Humanities Center	$ 2,080
Student Center	2,025
Life Science Building	1,564
Mcbride Hall	3,800
Wheeler Hall	3,480
Wunsch Hall	3,760
Total Recommendation	$16,709

OBJECTIVES, GOALS AND SCOPE OF PROJECT

The objective is to make the Otero Junior College campus as completely accessible to the physically handicapped as possible.

Phase I will make nearly all of the campus accessible. Those buildings which house essential services or programs will be remodeled. Where remodeling is not feasible, these services and programs will be relocated into accessible buildings.

Phase I makes provision for parking convenient to programs, services and housing. It will also provide approved sidewalks for wheelchair access to all campus buildints except the Counseling Center.

The following buildings will be accessible under Phase I: McBride, Student Center, Wheeler, Life Science, Wunsch, and portions of the main floor of Macdonald.

Upon completion of Phase I, the following space will still be inaccessible: Major portion of Macdonald, Kiva, Counseling Center.

These changes are planned as space becomes available: Directed Studies programs housed in the second floor of Macdonald Hall will be relocated in Wheeler Hall. The Counseling Center will make provisions for one counselor to be located in the Student Center. Lauguage Lab housed in the Kiva will be relocated near the Directed Studies program in Wheeler. The Directed Studies programs housed in Macdonald Hall and the Language Lab housed in the Kiva can be accommodated in Wheeler Hall only after an addition is developed on Wheeler Hall. It is the plan of the college to seek funding for an addition to accommodate a media center and these two programs could then be located in the addition as a part of the total media center.

NEEDS ASSESSMENT

	Current Use		Project Use W/Removal of Barriers	
	Students	Faculty	Students	Faculty
1. Wheelchair disabilities	0	0	2-3	0
2. Ambulatory disabilities	2-4	0	4-5	0
3. Blindness	0	0	2-3	0
4. Deafness	0	0	2-3	0
5. Cardiac Problems	0	0	2-3	0-1

This table indicates the current use of campus facilities by the handicapped and also the projected use if Architectural Barriers were removed.

CAMPUS SURVEY RESULTS

According to the CCHE guidelines on architectural barriers, the Otero Junior College campus was found to be relatively accessible, with only minor modifications needed. In most cases, the newer buildings on the campus require only restroom modification and entrance ramps. Cost of remodeling those buildings constructed prior to 1960 would be prohibitive and the programs housed in these structures can be relocated in accessible facilities as space becomes available. Adequate parking facilities for the handicapped can be provided by only minor curb and sidewalk changes.

With these modifications, the Otero Junior College campus will become accessible to the handicapped and will be better able to accommodate the disabled in the future.

BUILDING: Wunsch Hall

Constructed:	1966	Area, Sq. Ft.:	32,560
Rooms:	183	Activity Stations	---
Principal Tenant:	Dormitory		
Functional Use:	Men's and women's wing housing		

SURVEY RESULTS:

No parking for handicapped in parking lot. 5" step at main entrance, 6" steps at men's southeast entrance, and a 2'-6" elevation of steps at the north lobby entrance.

Restrooms accessible. Water fountain at 3'-6" height.

RECOMMENDATIONS:

1.	Lower phone enclosure in lobby	$ 100
2.	Lower drinking fountains in men's and women's wing	360
3.	Ramped entrance to lobby 2'-6"	3,000
4.	Ramped entrance to men's wing 5" (hot mix asphalt)	300
		$3,760

BUILDING: Humanities Center

Constructed: 1971
Area, Sq. ft.: 22,427
Rooms: 77
Activity Stations: 148
Principal Tenants: Art Department, Theater and Drama Department, Auditorium, Classrooms, Labs, Auditorium performances

SURVEY RESULTS:

Entrance to auditorium and first level from east main entrance has steps to auditiorum level and first level.

Men's restroom inaccessible

Women's restroom accessible

RECOMMENDATIONS:

1.	Men's restroom - install larger door, drop mirror, cut down privacy curtain by sink and insulate pipes of sink.	$ 500
2.	Women's restroom - drop mirror, larger door, insulate pipes	150
3.	Install cup dispenser at fountain	50
4.	Lower phone enclosure	100
5.	Install handrail on east auditorium sidewalk - 80' @ $16	1,280
	TOTAL	$2,080

BUILDING: Student Center

Area, Sq. ft.: 22,739

Constructed:

Activity Stations: 4

Rooms:

Principal Tenant: Student Government, Cafeteria,
Gameroom, meeting rooms, snackbar

SURVEY RESULTS:

4' elevation for steps at west entrance. East entrance adequate. Men's and women's restrooms inadequate. Phone enclosure at unacceptable level.

RECOMMENDATIONS:

1. Restrooms (men and women)

   Widen partitions, install 32" wide door, lower mirror and shelf, install 20" stool and grab bars, and insulate hot water and sewer lines from sink. $1,900

2. Lower phone enclosure 125

TOTAL $2,025

BUILDING: Wheeler Hall

Constructed:	1961	Area, Sq. ft.:	19,269
Rooms:	29	Activity Stations:	246
Principal Tenant:	Geology Dept., Library, History Dept., Nursing Arts, Chemistry Dept., Physics Dept., Classrooms, labs, library use		

SURVEY RESULTS:

Men's and women's restrooms inadequate. 2" step at east entrance and a 4" step at north entrance. Ramp between wheeler and life science has no handrail. Drinking fountain is at 40" height

RECOMMENDATIONS:

1.	2" ramp at east entrance (recommend hot-mix asphalt)	$ 100
2.	Restrooms (men and women) Install 20" stool, grab bars, move stall partitions and install 32" wide stall doors, lower mirrors, insulate hot water and sewer lines on sinks.	3,200
3.	Lower drinking fountain	180
	TOTAL	$3,480

BUILDING: Life Science Wing

Constructed:	1968	Area, Sq. ft.:	11,091
Rooms:	24	Activity Stations:	188
Principal Tenant:	Biology Department		
Functional Use:	Classrooms, labs		

SURVEY RESULTS:

Building accessible from Wheeler Hall and west entrance. Labs accessible for wheel chair disabilities. Drinking fountain at 40" height.

RECOMMENDATIONS:

1.	Lower drinking fountain	$ 180
2.	Install handrail on both sides of ramp between Life Science Wing and Wheeler hall - 64 feet at a cost of $16 per foot	1,024
3.	Ramped sidewalf from parking area	360
	TOTAL	$1,564

BUILDING: McBride Hall

Constructed: 1967 Area, Sq. Ft.: 28,739
Rooms: 48 Activity Stations 334
Principal Tenant: Occupational Dept.
Functional Use: Shops, Classrooms, Computer Center

SURVEY RESULTS:

Building accessible except for restrooms. Parking adequate as with ramped curb.

RECOMMENDATIONS:

1.	Men's restroom - Install conventional sink with insulation of pipes. Install 20" stool, grab bars, 32" wide door, move partitions and lower mirror.	$ 1,900
2.	Women's restroom - Insulate sink piping, move partitions, install 32" wide door, grab bars, 20" stool, lower mirror and towel dispensor.	1,900
		$ 3,800

ACCESSIBILITY OF THE CAMPUS

Upon completion of the Priority I removal of barriers, the buildings of the campus listed below will remain inaccessible to the handicapped for the reason stated.

Counseling Center	Temporary building, contains no programs that are not accessible in other campus buildings
Kiva	Cost prohibitive
Macdonald Hall	Cost prohibitive
Gym (student participation)	Cost prohibitive Building is scheduled for major remodeling at which time it will be accessible to handicapped spectators.

SUMMARY AND BUDGET

With the completion of the priority I Removal of Architectural Barriers, the campus and its programs will be accessible to the handicapped and disabled. Below is a budget needed for the completion of Priority I changes to make this accessibility possible.

Wunsch Hall	$ 3,760
Humanities Center	2,080
Student Center	2,025
Life Science Wing	1,564
McBride Hall	3,800
Wheeler Hall	3,480
TOTAL	$16,709

TRINIDAD STATE JUNIOR COLLEGE

The recommendations below are designed to make all facilities accessible that are integral to a student enrolled in the Gunsmithing or Gun Repair programs which are unique in the State of Colorado at TSJC.

It was the consensus of the Task Force that renovation of any other campus facilities was not recommended from a cost/benefit standpoint. The renovation expense compared to the projected number of handicapped users indicate that funds could more wisely be invested in renovation on other campuses in the State.

Mullen Building	$ 6,460
Library - Main Floor	5,225
Library - Basement	6,125
Science Building	960
Total Recommendation	$18,770

COLORADO COMMISSION ON HIGHER EDUCATION

Elimination of Architectural Barriers
Initial Survey

Please complete this survey form, retain a copy for your files, and return the original to: Dr. Jerome F. Wartgow, Assistant Director, Colorado Commission on Higher Education, 719 State Services Building, Denver, Colorado 80203.

The survey should be received by CCHE prior to the "Workshop on Elimination of Architectural Barriers," scheduled for March 11, 1974.

I. Name of Institution Trinidad State Junior College
II. Chairman of Committee on Architectural Barriers Dr. Douglas G. Anton
(or person completing this form)
III. Telephone 846-5531
IV. Estimated Number in each of the following categories currently at the institution:

	Students	Faculty and Staff
(a) Wheelchair Disabilities	0	0
(b) Ambulatory Disabilities (i.e. post polio, cerebial palsy, temporary ski injuries, etc.)	9	0
(c) Blindness	7	0
(d) Deafness	0	0
(e) Cardiac Problems	3	0
Total	19	0

V. Please list any programs offered by your institution that, to the best of your knowledge, are unique within the system of Public Higher Education in the State of Colorado. (i.e., B.S.-Veterinary Science; Ph.D.-Nursing; A.A.-Blacksmithing; etc.)

Gunsmithing
Museum Technology
Building Trades
Directed Studies

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INSTITUTION: Trinidad Junior College

BUILDING: Mullen

PRINCIPAL TENANT: Vocational training

FUNTIONAL USE: Gunsmithing, drafting, classrooms.

SURVEY RESULTS:

The entrance door giving access to the third floor is narrow and the door giving access to the first floor is narrow also. There are no adequate toilet facilities in the building and to give access to the second floor where the gunsmithing takes place will require about 100 feet of handrail.

RECOMMENDATIONS:

		JOB $
1.	West entrance door to third floor widen to 36 in. door.(replace door only)	$500
2.	Adapt two restrooms M&W (less sinks and urinals)	$3000
3.	Lower drinking fountain 2nd floor	$180
4.	Handrail to second floor thru shop 100 feet.	$1600
5.	Sidewalk to be built with handrail 100 feet @$5/ ln. ft.	$500
6.	Widen first floor doo to 36 in.	$500
7.	Lower drinking fountain on first floor	$180
	TOTAL:	$6,460

INSTITUTION: Trinidad Junior College

BUILDING: Library

PPINCIPAL TENANT: Learning resource center

FUNTIONAL USE: Library and Language lab.

SURVEY RESULTS:

A flight of stairs with a 21 in. rise exists at the North entrance. There are no accessible toilets to the handicapped. The building is three stories with the ground floor accessible, the sesond floor can be made accessible but the third floor would require an elevator.

RECOMMENDATIONS:		JOB $
1.	Ramp 21 in rise at entrance.	$2,100
2.	Adapt restroom facilities. (2) M&W (adapt less sinks and urinals)	$3,000
3.	Lower telephone in lobby	$125
	TOTAL:	$5225

INSTITUTION: Trinidad Junior College

BUILDING: Library Building (Mueseum Tech)

PRINCIPAL TENANT: Basement level Museum Tech

FUNTIONAL USE:

SURVEY RESULTS:

Entrance door is narrow and there are no adequate toilet facilities on this floor.

RECOMMENDATIONS:		JOB $
1.	Enlarge entrance doors to 36 in. (2)	$3,000
2.	Adapt restroom facilities. (2) M&W (adapt less sinks and urinals)	$3,000
3.	Lower telephone	$125
	TOTAL:	$6,125

INSTITUTION: Trinidad Junior College

BUILDING: Science Building

PRINCIPAL TENANT: Science Department

FUNTIONAL USE: Classrooms and laborotories

SURVEY RESULTS:

Access to the building is limited due to the dirt areas. With minor adaptations the building can be made accessible.

RECOMMENDATIONS:		JOB $
1.	Curb cut	$100
2.	Extend walk	$100
3.	Lower two (2) drinking fountains	$360
4.	Adapt restrooms (2) M&W (Mirrors, insulation, towel disp)	$400
	TOTAL:	$960

AIMS COMMUNITY COLLEGE

In order to efficiently make the Aims Community College accessible to the handicapped population of the campus and the community at large, the following recommendations have been made:

General Studies Building	
Add side unit to existing fountain	$ 175
Restroom modification	4200
Office Occupations and Technical Bldg.	
Lower drinking fountain	180
Trades-Industrial Bldg.	
Handrail	640
TOTAL	$5195

COLORADO MOUNTAIN COLLEGE

Based upon the nature of the program, type of facilities, and current and projected numbers of handicapped students in attendance, the Task Force recommends that all investments in removal of architectural barriers be made on the West (Glenwood Springs) Campus. No recommendations are made for the East (Leadville) Campus.

A summary of recommendations for the West Campus follows:

Academic Building	$5,646
Sopris Hall	6,445
Total Recommendation	$12,091

COLORADO COMMISSION ON HIGHER EDUCATION
Elimination of Architectural Barriers
Initial Survey

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The survey should be received by CCHE prior to the "Workshop on Elimination of Architectural Barriers," scheduled for March 11, 1974.

I. Name of Institution Colorado Mountain College

II. Chairman of Committee on Architectural Barriers (or person completing this form) William A. Bowden

III. Telephone 945-7481

IV. Estimated Number in each of the following categories currently at the institution:

	Students	Faculty and Staff
(a) Wheelchair Disabilities	0	0
(b) Ambulatory Disabilities (i.e. post polio, cerebial palsy, temporary ski injuries, etc.)	3	0
(c) Blindness	0	0
(d) Deafness	1	0
(e) Cardiac Problems	0	0
Total	4	0

V. Please list any programs offered by your institution that, to the best of your knowledge, are unique within the system of Public Higher Education in the State of Colorado. (i.e., B.S.-Veterinary Science; Ph.D.-Nursing; A.A.-Blacksmithing; etc.)

CCHE 2/74

COLORADO MOUNTAIN COLLEGE
WEST CAMPUS
Glenwood Springs, Colorado

Program Plan for Elimination of Barriers to the Handicapped for Colorado Mountain College West Campus and East Campus.

Introduction

It is the desire of Colorado Mountain College to provide at least minimal accessibility to the handicapped with the present facilities. Our goal will be to provide minimal accessibility on the West Campus to the Academic Building, College Center, and the lower floor of Sopris Hall, and on the East Campus to the Academic Building.

Needs Assessment

During our previous years of operation, the majority of our disabled students have been ambulatory disabilities (temporary ski injuries) and deafness. Projections of the number of students who would be attending our institution if minimal access was provided are difficult to make. We would anticipate the number of ambulatory disabilities would not decrease and we could anticipate an increase in the use of our facilities by wheel chair and ambulatory disabled if we provide minimal access.

Identification of Unique Programs

Colorado Mountain College West Campus has four programs that are unique in two year institutions, Animal Health Technology, Photography, Recreation Supervision, Natural Resources Management. There is doubt that the Animal Health Technology or Recreation Supervision are fields of work suited to handicapped persons. Other West Campus programs that should be available to local handicapped students are Business Management, Secretarial Science, Art, Commercial Art, and Graphic Communications. Minimal accessibility could be provided to the desired programs by modifications to the Academic Building, Sopris Hall and the College Center.

Colorado Mountain College East Campus has three programs that should be available to handicapped students, Business Management, Secretarial Science and Environmental Protection Technology. These desired programs could be made available with modifications to the Academic Building.

Results of Campus Survey

The results of the campus survey indicate that the standards as established by the Governors Committee on Employment of the Handicapped cannot feasably be totally met on either campus. Minimal accessibility can, however, be provided by modification to restrooms, walkways and construction of ramps alongside of stairs.
(Architectural Barrier Survey forms attached)

Detailed Building Analysis

Building priorities on the West Campus could be established as #1-Academic Building, #2-Sopris Hall, #3-College Center and #4-Walkways. East Campus #1 priority would be the Academic Building. With the relatively small expenditure all West and East Campus buildings could be accomplished as one project.

Costs as documented on the attached building survey forms are:

1.	West Campus Academic Building	$5771
2.	West Campus Sopris Hall	4600
3.	West Campus College Center	3000
4.	West Campus Walkways	2520
5.	East Campus Academic Building	4875
	Total	$20,766

Accessability of the Campus

It is not reasonable to make the entire campuses accessable by standards of the Governors Committee on Employment of the Handicapped because of cost, but it could be accessable for certain programs. The building that it is cost prohibitive to provide accessibility are West Campus-top floor of Sopris Hall and Dormitory, and East Campus-top floor of Dormitory and Auto Mechanics Building.

Summary and Budget

The program for both the West and East Campus of Colorado Mountain College would be to make each campus minimally accessable with some programs and buildings excluded because of cost. The total budget for West Campus would be $15,891 and for East Campus would be $4875.

WEST CAMPUS

Building: Academic

Constructed: 1967 Area (square feet): 27,407

Rooms: 65 Activity Stations: 597

Principal Tenant: Campus Administration and Student Personnel Services, Math Science Division, Learning Center-Library, Food Service, and Occupational programs.

Functional Use: Classrooms, teaching labs, offices, library, cafeteria

Survey Results: Two 6" steps exist at the end of the sidewalk and two 6" steps exist at the entrance. The entrance doors provide 30 1/2" clearance. Hallways provide 44" clearance. Mens and Womens restrooms are inadequate. Handrails will be required in some areas. Telephone needs to be lowered and cup dispensers installed at drinking fountains.

Recommendation:

1.	Provide and designate 3 or 4 parking spaces	$ 100
2.	Ramp #1 at end of walk	1300
3.	Ramp #2 at entrance	1100
4.	Lower one telephone	185
5.	Install 6' of handrail	96
6.	Modify Mens Restroom	1500
7.	Modify Womens Restroom	1500
8.	Install Cup Dispensers	50
		$5771

WEST CAMPUS

Building: Sopris Hall

Constructed: 1967 Area (square feet): 19186

Rooms: 89 Activity Stations: 361

Principal Tenant: Central Administration, Communications-Humanities Division and Occupations Division.

Functional Use: Classrooms, teaching labs and offices

Survey Results: Parking is available and entrance doors provide 30 1/2 " clearance. Hallways provide 44" clearance. Mens and womens restrooms are inadequate. Telephones need to be lowered. The upper floor would require an elevator to be accessable.

Recommendations: Make the first floor minimally accessable by:

1. Provide and designate 3 or 4 parking spaces	$ 100
2. Modify Mens Restroom	2200
3. Modify Womens restroom	2200
4. Lower Telephone	100
Total	$4,600

WEST CAMPUS

Building: College Center

Constructed: 1969

Area (square feet): 3,776

Rooms: 7

Activity Stations: 150

Principal Tenant: Student Activities

Functional Use: Social Center, game room, and meetings

Survey Results: Parking is available and entrance provides 31 inches clearance. Restrooms are inadequate. The remainder of the building is accessable.

Recommendations:

1. Modify the Mens Restroom	$1500
2. Modify the Womens Restroom	1500
Total	$3000

WEST CAMPUS

Area: Walkway between Academic Building and Sopris Hall

Constructed: 1967

Survey Results: Fourteen extended steps exist between the Academic Building and Sopris Hall.

Recommendations:

1. Install 120 feet of sidewalk ramp	$ 600
2. Install 120 feet of handrail	1920
Total	$2520

EAST CAMPUS

Building: Academic

Constructed: 1967 Area: 27,407

Rooms: 63 Activity Stations: 590

Principal Tenant: Administration, Student Personnel Services, Instructional Divisions, Learning Center and Library, and Food Service.

Functional Use: Classrooms, teaching labs, offices, library and cafeteria

Survey Results: Parking is available. There is an 8" step at the end of the sidewalk and two 6" steps at the entrance. The entrance provides 30 1/2 " clearance. Hallways provide 44 " clearance. Mens and Womens restrooms are inadequate. Telephone needs to be lowered and cup dispensers installed at drinking fountains.

Recommendations:

1. Provide and designate 3 or 4 parking spaces	$ 100
2. Ramp #1 at end of walk	500
3. Ramp #2 at entrance	1100
4. Lower one telephone	185
5. Modify Mens Restroom	1500
6. Modify Women's Restroom	1500
7. Install Cup Dispensers	50
Total	$4875

INSTITUTION: Colorado Mountain College

BUILDING: Academic Building - West Campus

PRINCIPAL TENANT: Library and academic offices.

FUNTIONAL USE: Classrooms, library, cafeteria and offices.

SURVEY RESULTS:

Parking spaces are not provided and there are two series of steps. One series 13 in. and the other is 11 in. There are no adequate toilet facilities and an existing ramp in the library should be extended and a handrail installed.

RECOMMENDATIONS:

		JOB $
1.	Provide 3-4 parking stalls.	$100
2.	Ramp 13 in. rise.	$1,300
3.	Ramp 11 in. rise	$1,100
4.	Make telephone in office accessible	$ -0-
5.	Install 6 ft. of handrail in library ramp.	$96
6.	Adapt restrooms (2) M&W (adapt less sinks and urinals)	$3,000
7.	Install cup dispenser to fountain in alcove.	$50
	TOTAL:	$5,646

INSTITUTION: Colorado Mountain College

BUILDING: Sopris Hall

PRINCIPAL TENANT: Biology and Veterinary and Art department

FUNTIONAL USE: Classrooms, labs and vetrinary rooms.

SURVEY RESULTS:

The access from the academis boilding to sopris needs to have a sidewalk installed and a handrail (120 ft. of walk and handrail). The doors to the restrooms are narrow and the toilet facilities are inadequate. Parking should be provided by the building.

RECOMMENDATIONS:

		JOB $
1.	Install sidewalk to Sopris Hall. (120 ft.)	$600
2.	Install handrail on sidewalk (120 ft.)	$1,920
3.	Widen doors to restrooms (2) M&W	$700
4.	Adapt toilet facilities (2) M&W (adapt less sinks and urinals)	$3,000
5.	Lower public telephone	$125
6.	Provide 3-4 parking spaces	$100
	TOTAL:	$6,445

COLORADO NORTHWESTERN COMMUNITY COLLEGE

Minimal recommendations to make the campus of Colorado Northwestern Community College free of architectural barriers to the handicapped are summarized as follows:

	College Recommendation	CCHE Recommendation
Blakeslee	$ 8,600	$ 5,800
McLaughlin Building	11,000	8,200
Hefley Building	7,000	4,200
Johnson Building	125	125
Total Recommendation	$26,725	$18,325

COLORADO COMMISSION ON HIGHER EDUCATION
Elimination of Architectural Barriers
Initial Survey

Please complete this survey form, retain a copy for your files, and return the original to: Dr. Jerome F. Wartgow, Assistant Director, Colorado Commission on Higher Education, 719 State Services Building, Denver, Colorado 80203.

The survey should be received by CCHE prior to the "Workshop on Elimination of Architectural Barriers," scheduled for March 11, 1974.

I. Name of Institution Colorado Northwestern Community College

II. Chairman of Committee on Architectural Barriers James Real
(or person completing this form)

III. Telephone 675-2263

IV. Estimated Number in each of the following categories currently at the institution:

	Students	Faculty and Staff
(a) Wheelchair Disabilities	0	0
(b) Ambulatory Disabilities (i.e. post polio, cerebial palsy, temporary ski injuries, etc.)	0	0
(c) Blindness	0	0
(d) Deafness	0	0
(e) Cardiac Problems	0	0
Total	0	0

V. Please list any programs offered by your institution that, to the best of your knowledge, are unique within the system of Public Higher Education in the State of Colorado. (i.e., B.S.-Veterinary Science; Ph.D.-Nursing; A.A.-Blacksmithing; etc.)

Dental Hygiene
Career Pilot

CCHE 2/74

ARCHITECTURAI BARRIERS SURVEY

Name of Campus: COLORADO NORTHWESTERN COMMUNITY COLLEGE

Name of Building: Hefley Bldg.

Use, Purpose: Science Lab , and Classrooms

Street Address: Kennedy Drive

Life Expectancy of Building: ______

Instructions for survey:

Handrails on stairs, ramps, and in toilet rooms should be 32 inches from floor. If not, indicate in margin. Measure from the nose of the stair to the top of the handrail. Also, it is requested that the surveyor include a cross-section of the rail.

In measuring tables, measure from the floor to the underside of table. If there is a lip which extends below table top, measure to bottom of that. We are trying to determine how much space is usable by someone in a wheelchair.

Ramps should have a 6 foot level clearance at the top and at the bottom. There should be intermediate level platforms at 20-30 foot intervals for long ramps.

Campus Maps:

A campus map will also be needed (one from each campus) that includes the following information: major circulation paths; slopes on walkways greater than 5%; all steps with indication of total vertical rise in inches; campus parking areas; and ramped curbs.

Recommendations:

Modify Restrooms	2 @ $3500.00	$7000.00

ARCHITECTURAL BARRIERS SURVEY

Name of Campus: COLORADO NORTHWESTERN COMMUNITY COLLEGE

Name of Building: McLaughlin Bldg.

Use, Purpose: Library and Administration

Street Address: Kennedy Drive

Life Expectancy of Building: ____________

Instructions for survey:

Handrails on stairs, ramps, and in toilet rooms should be 32 inches from floor. If not, indicate in margin. Measure from the nose of the stair to the top of the handrail. Also, it is requested that the surveyor include a cross-section of the rail.

In measuring tables, measure from the floor to the underside of table. If there is a lip which extends below table top, measure to bottom of that. We are trying to determine how much space is usable by someone in a wheelchair.

Ramps should have a 6 foot level clearance at the top and at the bottom. There should be intermediate level platforms at 20-30 foot intervals for long ramps.

Campus Maps:

A campus map will also be needed (one from each campus) that includes the following information: major circulation paths; slopes on walkways greater than 5%; all steps with indication of total vertical rise in inches; campus parking areas; and ramped curbs.

Recommendations:

Modify 2 Rest Rooms @ $3500.00 $7000.00

Install concrete ramp at main entrance $2400.00

Install hand rail to library 100 ft. @16.00 ft $1600.00

ARCHITECTURAL BARRIERS SURVEY

Name of Campus: COLORADO NORTHWESTERN COMMUNITY COLLEGE

Name of Building: Johnson Bldg.

Use, Purpose: Recreation and Cafeteria

Street Address: Kennedy Drive

Life Expectancy of Building: ________________

Instructions for survey:

Handrails on stairs, ramps, and in toilet rooms should be 32 inches from floor. If not, indicate in margin. Measure from the nose of the stair to the top of the handrail. Also, it is requested that the surveyor include a cross-section of the rail.

In measuring tables, measure from the floor to the underside of table. If there is a lip which extends below table top, measure to bottom of that. We are trying to determine how much space is usable by someone in a wheelchair.

Ramps should have a 6 foot level clearance at the top and at the bottom. There should be intermediate level platforms at 20-30 foot intervals for long ramps.

Campus Maps:

A campus map will also be needed (one from each campus) that includes the following information: major circulation paths; slopes on walkways greater than 5%; all steps with indication of total vertical rise in inches; campus parking areas; and ramped curbs.

Recommendation:

Lower Pay Telephone	$125.00

ARCHITECTURAL BARRIERS SURVEY

Name of Campus: COLORADO NORTHWESTERN COMMUNITY COLLEGE

Name of Building: Blakeslee

Use, Purpose: Dental Hygeine Clinic and Classroom

Street Address: Kennedy Drive

Life Expectancy of Building: __________

Instructions for survey:

Handrails on stairs, ramps, and in toilet rooms should be 32 inches from floor. If not, indicate in margin. Measure from the nose of the stair to the top of the handrail. Also, it is requested that the surveyor include a cross-section of the rail.

In measuring tables, measure from the floor to the underside of table. If there is a lip which extends below table top, measure to bottom of that. We are trying to determine how much space is usable by someone in a wheelchair.

Ramps should have a 6 foot level clearance at the top and at the bottom. There should be intermediate level platforms at 20-30 foot intervals for long ramps.

Campus Maps:

A campus map will also be needed (one from each campus) that includes the following information: major circulation paths; slopes on walkways greater than 5%; all steps with indication of total vertical rise in inches; campus parking areas; and ramped curbs.

Recommendation:

Modify 2 Rest Rooms $3500.00 ea. $7000.00

Install hand rails on walks, 100 ft. @$16.00 $1600.00

NORTHEASTERN JUNIOR COLLEGE

In terms of current and projected numbers of handicapped students in attendance at Northeastern Junior College, the Task Force judged it to be infeasible to make all buildings on the campus accessible. From a cost/benefit standpoint, funds for this purpose could be more profitably invested at other campuses in the state.

However, removal of barriers in four top priority buildings will make it possible for students in selected, "unique" programs to take advantage of these educational programs.

A summary of these recommendations is as follows:

Beede-Hamil Hall	$ 3,175
Smith Library (including elevator)	46,780
Cafeteria	3,580
D. W. Lane Hall (first floor only)	5,075
Total Recommendation	$58,610

COLORADO COMMISSION ON HIGHER EDUCATION
Elimination of Architectural Barriers
Initial Survey

Please complete this survey form, retain a copy for your files, and return the original to: Dr. Jerome F. Wartgow, Assistant Director, Colorado Commission on Higher Education, 719 State Services Building, Denver, Colorado 80203.

The survey should be received by CCHE prior to the "Workshop on Elimination of Architectural Barriers," scheduled for March 11, 1974.

I. Name of Institution Northeastern Junior College

II. Chairman of Committee on Architectural Barriers (or person completing this form) Norman J. Berry

III. Telephone 522-6600 Ext. 671

IV. Estimated Number in each of the following categories currently at the institution:

	Students	Faculty and Staff
(a) Wheelchair Disabilities	0	0
(b) Ambulatory Disabilities (i.e. post polio, cerebial palsy, temporary ski injuries, etc.)	5	0
(c) Blindness	1	0
(d) Deafness	0	0
(e) Cardiac Problems	None reported.	0
Total	6	0

V. Please list any programs offered by your institution that, to the best of your knowledge, are unique within the system of Public Higher Education in the State of Colorado. (i.e., B.S.-Veterinary Science; Ph.D.-Nursing; A.A.-Blacksmithing; etc.)

CCHE 2/74

NORTHEASTERN JR. COLLEGE

1. Curb Ramps 6 @ $100 $600

2. Walker Hall/Walker Addition

Building contains administrative offices plus two classrooms. West entrance is accessible to first floor of Walker Hall. Two restrooms and four offices are located on this level. All other offices and classrooms are reached by stairs. The addition and the original building are constructed on different levels ruling out use of a common elevator.

It is recommended that no modifications be made to this building.

a. A handicapped student can use one of the accessible offices to meet with persons from inaccessible areas of the building.

b. Costs for an elevator and internal ramps would be excessive.

c. Since usage by the handicapped will be limited to short periods of time, restroom modifications are not recommended.

3. Beede-Hamil Hall

A single level building housing Agri-Business and electronics labs classrooms and offices. South entrance is accessible.

a. Restrooms

Widen stall, grab bars, raise stool height, lower mirror and towel dispenser, insulate sink.

each $1500 $3000

b. Side Bubbler on water cooler $ 175

4. Smith Hall (Library)

This original building on campus now houses the college library. A portion of the building designed for an elevator shaft now contains a stairway. It will be necessary to check with Fire Codes regarding installation of a elevator library in this area.

a. Entrance ramp		
	24" @ $100/in.	$2400
b. Restrooms		
Complete conversion-all items		
	2 @ $2100	$4200
c. Elevator		
4 stop		$40,000
d. Lower water fountain		$ 180

6. Student Center

Only access is from cafeteria via kitchen and service areas to an elevator. This elevator gives access to the second floor which has a ballroom and meeting rooms. From the second floor a second services elevator serves the first floor and basement area. First floor has a bookstore and snack bar; basement contains games area. Public stairs have an open tread design and non-functional (2" x 10") handrails.

Because of the split level design of this building it is recommended that students be issued the required door and elevator keys so as to be able to use cafeteria access.

a. Restroom Modifications (second floor)		
Complete less urinal		
	2 @ $1700	$3400
b. Lower Water Cooler		$ 180

7. D.W. Lane Hall/ Phillips-Whyman Science Bldg.

These two buildings are connected on the first and second levels. The North and East entrances are level via 26" clear doors. A possible elevator location exists in a storage area adjacent to the North entrance. Chemistry, Physics, and Biology labs are located on the second floor.

a.	Restroom Modification 2 @ $1700	$3400
b.	Add side unit to existing floor cooler	$ 175
c.	Widen east entry door to 36"	$1500
d.	Install 18,000 lb.-2 stop elevator	$40,000

8. Humanities Building

Existing entry ramps are inadequate. Auditorium entrance is up four steps from the first floor. A ramp could be installed to the auditorium entrance level by removing an existing unused planter. Building design has provision for installation of an elevator on the North side of the building.

a.	Add handrails to East ramp, replace West ramp	$2000
b.	Modify Restrooms Stall, Stools, Lower Mirror, towel dispenser, modify sinks 2 @ $1700	$3400
c.	Lower water cooler	$ 180
d.	Install 18,000 lbs. elevator	$30,000

9. Auto Shop Bldg.-North Campus

a.	Add side bubbler unit to water cooler	$175
b.	Modify men's restroom stall, stool, mirror, dispenser	$1500

(Women's restroom is not large enough to allow wheelchair entry and closing of the door.)

10. Farm Mechanics Building

(No women's restroom)

a.	Side Bubbler unit	$ 180
b.	Modify mens room-- widen stall, lower mirror, towel and soap dispensers	$ 900

(only minimum work)

SUMMARY

	Item	Cost
1.	Curb Ramps	$ 600
2.	Beede-Hamil	3,175
3.	Smith Hall	46,780
4.	Cafeteria	4,680
5.	Student Center	3,500
6.	Lane Hall/Science Bldg.	45,075
7.	Humanities Bldg.	35,580
8.	Auto Shop--North Campus	1,675
9.	Farm Mech.--North Campus	1,080
		$142,225

APPENDIX A

Correspondence and Forms Related
To Development of Statewide Plan
For Elimination of Architectural Barriers

COLORADO COMMISSION ON HIGHER EDUCATION

1876

LARRY E. SCOTT, Chairman
BROWN W. CANNON, Vice-Chairman
WILLIAM E. FOSTER
PAT GRIFFIN
FRANK S. HOAG, JR.
ROBERT C. McHUGH
DONALD C. McKINLAY
FRED N. THOMAS
LEO J. VALDEZ, JR.

719 STATE SERVICES BUILDING
DENVER 80203

TELE: AREA 303
892-2115

February 20, 1974

To: Presidents and Governing Board Executives
From: Frank C. Abbott
Subject: Procedure for development of plan for removal of architectural barriers to the handicapped; meeting, March 11, 1974.

After discussion and with the encouragement of the Facilities Planning Committee, the Commission on Higher Education is taking steps to develop a statewide plan for elimination of architectural barriers to the handicapped in Colorado institutions of higher education. More than 300,000 Colorado citizens including many students or potential students are limited in mobility by disease, injury or age. While newer structures have often taken account of accommodating handicapped persons, few older buildings do so. To overcome these conditions which constitute serious barriers will require considerable effort and expense; but the extent of need, possible alternatives, and cost are at present unknown. To avoid dealing with these needs on a haphazard basis the present effort has been organized.

Recognizing historical problems of design, construction, scheduling, etc., the task will be a complex one. No assumptions have been made concerning the desirability of accessibility on every campus, or in every building within a campus. However, it is submitted that concepts of desirable accessibility need to be defined, and should be defined in the plan. It is our intention that the plan be developed during the next 6 months in order that it may provide a basis for consideration of and action on capital budget requests in the budget cycle for 1975-76 (and probably in subsequent years).

All public colleges and universities are being asked to participate in the development of this plan. The following paragraphs outline a suggested procedure for approaching the problem.

(1) Each President is asked to form a campus-wide committee or work group for the purpose of studying and making recommendations concerning elimination of barriers to the handicapped. Suggested composition of this group might include representatives of the Presidents Office, Facilities Planning Office, Dean's Office, Handicapped Students Association, Faculty, and Physical Plant.

(2) Members of the Campus Committee should be familiar with the Colorado Architectural Barriers Statute (copy attached), signed into Law on May 27, 1965.

(3) Institutions are asked to have a representative in attendance at a "Workshop on Elimination of Architectural Barriers," to be held on Monday, March 11, 1974, from 9:30-11:30 a.m. in Room 711, Social Services Building, 1575 Sherman Street, Denver. Preferably, the institutional representative will be chairperson of the committee referred to in (1) above.

Included in the workshop agenda will be (a) procedures for conducting a needs assessment, (b) advice and information on how to do a physical "survey of accessibility" on each campus, (c) scheduling (where appropriate) of campus visits by a team of consulting engineers, architects and planners, and (d) instructions on preparation of a program plan for elimination of architectural barriers.

(4) In preparation for the "Workshop on Elimination of Architectural Barriers," each Campus Committee is asked to complete the enclosed survey form and forward a copy to CCHE in advance of the March 11 meeting. Instructions for completion of the forms are attached.

(5) The development of the statewide plan is being coordinated by Dr. Jerome Wartgow of the CCHE staff. Please direct any comments or questions to him at 892-2115.

With the participation of all institutions in this effort we hope and believe that a solid base can be provided in a relatively brief time for recommendations of action through which barriers now confronting handicapped persons on most campuses in Colorado can rapidly be reduced.

PERSONS ATTENDING CCHE WORKSHOP
ON ELIMINATION OF ARCHITECTURAL BARRIERS

March 11, 1974

Name	Institution	Phone	
Bill Taber	University of Colorado	443-2211	X 7348
Robert R. Jackson, M.D.	Craig Rehab Hospital	761-3040	
John Kreidich	Auraria Higher Education Center	892-3337	
Bill Bowden	Colorado Mountain College	945-7481	
Bill Branton	Mesa College	248-1214	
Bob Burnham	CSU	491-6062	
Frank L. Miles	MSC	292-5190	X 240
Ted Guttadore	CCD	287-3311	X 241
Everett Manchester	Adams State College	589-7346	
H. J. Dorricott	Western State College	943-2186	
Wayne McMurtry	Southern Colorado State College	549-2211	
Ned Wallace	Fort Lewis College	247-7265	
Alice Wooster	CCD	287-3311	X 241
Robert L. Perkins	U. of C. at Denver	573-6964	
Sam Redman	Governor's Commission	892-2255	
Skip Howes	University of Colorado	449-4393	
Steve Crawford	University of Colorado	443-35[illegible]	
John Whinery	Otero Jr. College	384-44[illegible]	
[illegible]on Malleck	Otero Jr. College	384-4446	
Merle Bush	Otero Jr. College	384-4446	
Bill Nilsen	Otero Jr. College	384-4446	
W. T. McGregor	St. Board for Community Colleges	892-3151	
L. E. Klatt	Colorado Division of Public Works	892-2626	
Carl K. Hammergren	CUMC	394-7457	
John H. Scheufler	EPCC	471-7546	X 308
Joseph Geiger	State College Trustees	892-2588	
Tedde Kast	University of Northern Colorado	356-3178	
Jack A. Bowen	University of Northern Colorado	351-2361	
Hank Atkinson	University of Colorado, Boulder	443-2211	X 8245
Jerry Wartgow	CCHE	892-2115	
Michael Sanchez	University of Colorado-Colorado Springs		
Douglas Anton	Trinidad Jr. College	846-5531	
James Peal	Rangeley College	675-2263	
No[illegible]an J. Berry	Northeastern Jr. College	522-6600	X 631
Gor[illegible]lon Scott	School of Mines	279-3381	

Institutional Representatives

CCHE Committee on Elimination of Architectural Barriers

Robert Burnham
Director of Facilities Planning
Colorado State University
Fort Collins, Colorado 80521

John McAfee
Director of Planning
University of Northern Colorado
Greeley, Colorado 80631

Richard Laughlin
Dean of Students
Aims College
Greeley, Colorado 80631

Ted Guttadore
Community College of Denver-North Campus
1001 East 62nd Avenue
Denver, Colorado 80216

John Kreidich
Auraria Higher Education Center
505 Symes Building
820 16th Street
Denver, Colorado 80202

Joseph Bailey, President
Arapahoe Community College
5900 South Santa Fe Drive
Littleton, Colorado 80120

Billie Henderson
Vice President
Lamar Community College
Lamar, Colorado 81052

Eivind W. Nilsen
Director of Facilities Planning
Otero Junior College
La Junta, Colorado 81050

Michael Sanchez
Assistant Dean for Student Relations
University of Colorado-Colorado Springs
Colorado Springs, Colorado 80907

Douglas Anton
Dean of General Studies
Trinidad State Junior College
Trinidad, Colorado 81082

Everett Manchester
Administrative Assistant
Adams State College
Alamosa, Colorado 81101

Ned Wallace
Dean of Administration
Fort Lewis College
Durango, Colorado 81301

H. J. Dorricott, Director
Business Affairs
Western State College
Gunnison, Colorado 81230

Betsy Sneed
Associate Dean of Students
Mesa College
Grand Junction, Colorado 81501

William A. Bowden
Director of Physical Plant
Colorado Mountain College - West
Glenwood Springs, Colorado 81601

Wayne McMurtry
Director of Administrative Services
Southern Colorado State College
Pueblo, Colorado 81004

John Scheufler
Assistant to the Dean of Instruction
El Paso Community College
2200 Bott Avenue
Colorado Springs, Colorado 80904

David Femmer
Budget Officer
Colorado School of Mines
Golden, Colorado 80401

APPENDIX

Itinerary of Campus Visits by the CCHE Task Force

April 1	Colorado State University, Fort Collins
April 3	University of Northern Colorado, Greeley
April 5	Community College of Denver, Red Rocks and North
April 8	Lamar Community College, Lamar
	Otero Junior College, La Junta
April 9	Trinidad Community College
	Adams State College, Alamosa
April 11	Auraria Higher Education Center
April 15	Western State University, Gunnison
	Mesa College, Grand Junction
April 16	Fort Lewis College, Durango
April 17	Colorado Mountain College, Glenwood Springs
April 22	University of Colorado, Colorado Springs
	El Paso Community College
April 30	Colorado School of Mines, Golden
May 1	Southern Colorado State College, Pueblo
May 13	Fort Morgan Community College
	Northeastern Junior College, Sterling
May 16	Arapahoe Community College
May 20	Aims Community College, Greeley

Agenda Item ______
3/29/74

COLORADO COMMISSION ON HIGHER EDUCATION

719 State Services Building
Denver, Colorado 80203

TOPIC: Program Planning Funds for Elimination of Architectural Barriers to the Handicapped

The Facilities Planning Committee has requested funds to be used in development of a state-wide plan for elimination of architectural barriers to the handicapped in Colorado institutions of higher education.

Recognizing historical problems of design, construction, scheduling, etc., the task will be a complex one. No assumptions have been made concerning the desirability of accessibility on every campus, or in every building within a campus. However, it is submitted that concepts of desirable accessibility need to be defined, and should be defined in the plan. It is the intent of the Facilities Planning Committee that the plan be developed during the next six months in order that it may provide a basis for consideration of and action on capital budget requests in the budget cycle for 1975-76 (and probably in subsequent years).

A Task Force consisting of a professional engineer, graduate students in architecture, handicapped students and faculty, facilities planning officers and representatives of CCHE has outlined a procedure for development of the plan. Preliminary information has been sent to all state institutions and each has been invited to send a representative to a "Workshop on Elimination of Architectural Barriers" that will be conducted by the Task Force."

Following the workshop, and during the next four months, it is proposed that a team of consulting engineers, architects, and planners, drawn from the Task Force, visit each appropriate campus. The purpose of the campus visits will be to conduct surveys and prepare program plans and cost estimates for elimination of architectural barriers in a manner consistent with the state-wide plan.

Cost of the project is estimated at $2,000, to be used primarily for the purpose of covering travel, per diem and honoraria (where necessary) of the consultants.

RECOMMENDATION: That the CCHE Facilities Planning Committee be provided with not to exceed $2,000 for the purpose of preparing a state-wide plan for elimination of architectural barriers to the handicapped, the funds to come from the 1973-74 appropriation to the Commission for program planning related to renovations.

COLORADO COMMISSION ON HIGHER EDUCATION

LARRY E. SCOTT, Chairman
BROWN W. CANNON, Vice-Chairman
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LEO J. VALDEZ, JR.

719 STATE SERVICES BUILDING
DENVER 80203

TELE: AREA 303
892-2115

March 25, 1974

To: Campus Representatives to the CCHE Committee on Elimination of Architectural Barriers to the Handicapped

From: Jerry Wartgow, Chairman

Subject: Itinerary of Campus visits by Consulting Team

As confirmation of our earlier discussions, I have enclosed the following materials which will assist in the development of a statewide plan for elimination of architectural barriers to the handicapped.

(1) A confirmed schedule of dates and times of campus visits by the consulting team. Please check the schedule and your calendar, and notify me of any discrepancies.

(2) A copy of the Survey of Building Priorities Form which should be completed prior to the date of the visit by the consulting team.

(3) A copy of the Architectural Barriers Survey Form which should eventually be completed for each building on the campus. It would be helpful if all top priority buildings (See item 2 above) were surveyed prior to the campus visits.

(4) For your information, I have enclosed a list of names of persons who attended the March 11 workshop in Denver. I have also included names and addresses of persons to whom this memorandum has been mailed, in the hope that this information will facilitate the exchange of information and experiences relating to removal of architectural barriers on the respective campuses.

Thank you again for your continued cooperation in the development of a statewide plan for elimination of architectural barriers to the handicapped. I am looking forward to visiting with you on the dates indicated. In the meantime, if you have any questions or suggestions, please feel free to contact me.

JFW:mc

cc: Members of the Facilities Planning Committee

COLORADO COMMISSION ON HIGHER EDUCATION
Elimination of Architectural Barriers
Initial Survey

Please complete this survey form, retain a copy for your files, and return the original to: Dr. Jerome F. Wartgow, Assistant Director, Colorado Commission on Higher Education, 719 State Services Building, Denver, Colorado 80203.

The survey should be received by CCHE prior to the "Workshop on Elimination of Architectural Barriers," scheduled for March 11, 1974.

I. Name of Institution ____________________
II. Chairman of Committee on Architectural Barriers ____________________
(or person completing this form)
III. Telephone ____________________
IV. Estimated Number in each of the following categories currently at the institution:

	Students	Faculty and Staff
(a) Wheelchair Disabilities		
(b) Ambulatory Disabilities (i.e. post polio, cerebial palsy, temporary ski injuries, etc.)		
(c) Blindness		
(d) Deafness		
(e) Cardiac Problems		
Total		

V. Please list any programs offered by your institution that, to the best of your knowledge, are unique within the system of Public Higher Education in the State of Colorado. (i.e., B.S.-Veterinary Science; Ph.D.-Nursing; A.A.-Blacksmithing; etc.)

CCHE 2/74

INSTRUCTIONS FOR PREPARATION OF A PROGRAM PLAN

The final step in the planning process for removal of architectural barriers is the development of a program plan which sets forth the nature of the project in detail, justifying its need, describing the activities involved and estimating the cost.

The following outline sets forth the basic information required in the program plan and suggests a format for presentation of this information. Variations from and additions to this outline are expected as required by individual projects. However, consideration to each of the areas identified should be a minimal requirement for every plan.

1. Introduction

   This section should state the objectives, goals and scope of the project, along with historical and background information which is necessary to fully evaluate the plan.

2. Needs Assessment

   This section should present data on the number of handicapped students and faculty who are currently using the campus facilities, as well as the nature of their disabilities. Also included should be projections of the number of students who would be attending the institution if all architectural barriers were removed.

3. Identification of Unique Programs

   This section of the program plan should identify all programs that are unique to the institution, and should specify courses that are required for completion of those programs.

All buildings housing courses that are part of a unique program or are of a general requirement nature, should also be identified.

4. Results of Campus Survey

This section of the program plan should consist of a summary of the campus survey, (based upon standards included in this booklet).

5. Detailed Building Analysis

This section should include a listing of building priorities by quartile rankings. CCHE has devised forms and instructions to assist in determining priorities and these forms may be inserted directly into the program plan.

This section should also include a page for each building surveyed, on which should be a summary of the survey and cost estimates and recommendations for removal of barriers in that building. A suggested format and sample building analysis sheets are attached.

6. Accessibility of the Campus

This section should include a list of those buildings that, upon completion of the plan, will remain inaccessible to the handicapped because of architectural barriers. A statement of reasons for inaccessibility should be included for each building listed. Example of such reasons might be cost prohibitive, building scheduled for demolition, contains no programs that are not accessible in other campus buildings, etc.

7. Summary and Budget

The final section should summarize the plan and present a budget for implementation of the entire accessibility plan.

ARCHITECTURAL BARRIERS SURVEY

Name of Campus: ______________________________

Name of Building: ______________________________

Use, Purpose: ______________________________

Street Address: ______________________________

Life Expectancy of Building: ______________________

Instructions for survey:

Handrails on stairs, ramps, and in toilet rooms should be 32 inches from floor. If not, indicate in margin. Measure from the nose of the stair to the top of the handrail. Also, it is requested that the surveyor include a cross-section of the rail.

In measuring tables, measure from the floor to the underside of table. If there is a lip which extends below table top, measure to bottom of that. We are trying to determine how much space is usable by someone in a wheelchair.

Ramps should have a 6 foot level clearance at the top and at the bottom. There should be intermediate level platforms at 20-30 foot intervals for long ramps.

Campus Maps:

A campus map will also be needed (one from each campus) that includes the following information: major circulation paths; slopes on walkways greater than 5%; all steps with indication of total vertical rise in inches; campus parking areas; and ramped curbs.

PART I - GENERAL INFORMATION

1. How many public entrances? ____________________

2. How many floors? ____________________

3. Are there visual and audio signals in the building? (Fire, etc.) YES NO

4. Classify the building by circling appropriate numbers:

Classroom	1	Apartment	8
Teaching Lab	2	Health and Medical	9
Research Lab	3	Restaurant	10
Cultural, Recreational	4	Merchandising and Service	11
Sports	5	Governmental	12
Office	6	Other (Specify)	13
Dormitory	7		

PART II ACCESS TO BUILDING

5. OFFSTREET PARKING AREA is a space located conveniently to the building. If more than one, select the one with the least barriers.

Is offstreet parking adjacent to the building? YES NO

Can tall vans, etc., clear its height? YES NO

If adjacent offstreet parking is not available, identify and give location of nearest, most convenient parking area.

Are parking area and building separated by a street? YES NO

Is there a parking space at least 12 feet wide reserved for handicapped persons? YES NO

Is the surface smooth, hard? YES NO

Is the surface level? YES NO

Is it necessary for a wheelchair person to travel behind parked cars? YES NO

Is there a curb or step(s) between parking area and entrance walkway? YES NO

Are curbs ramped at crosswalks? YES NO

Location of breaks in curb (driveway, ramp, etc.)

6. PASSENGER LOADING ZONE is a space convenient to the building reserved for cars or public transportation to pick up or discharge passengers. The passenger loading zone might be alongside the street or a front, side or rear driveway. If there are more than one, select the one with the least barriers in relation to the most accessible entrance.

Is there a passenger loading zone? YES NO

If yes, where is it located in relation to the selected entrance?

Is it marked for the handicapped and policed for violators? YES NO

Is there a curb or step(s) between passenger loading zone and entrance walkway? YES NO

7. APPROACH TO SELECTED ENTRANCE is the entire distance from the parking area or loading zone to the door of the building. "Steps" throughout this form mean individual risers, not the total flight.

Which entrance was selected as most accessible?

Is this entrance always open to the public? YES NO

During what hours is it closed?

Is the width of the walkway 48 inches or more? YES NO

Are elevators accessible from the selected entrance? YES NO

Is the approach to the entrance door ground level? YES NO

If the walkway is inclined, is it greater than 5%? YES NO

If it is greater than 5% what is the slope? ____________________

If there are steps in the approach to the entrance door, give total vertical rise. ____________________

If there are steps or a slope greater than 5%, is there a sturdy handrail on each side? YES NO

8. ENTRANCE DOOR (&DOORWAYS)

What is the width of the entrance doorway with the door open? Measure the clear opening when the door is open. Panic hardware will cause the opening to be 2 inches or so less. This gives the amount of space actually available to someone in a wheelchair. If the entrance has double-leafed doors, base your answer on only one side. ________________in.

Is there a step up or down to entrance door? YES NO

Is the threshold flush with floor? YES NO

Door swings in___, out___, revolving____, or automatic___.

Measure the depth and width of the level area outside the door. ___________x______in.
It must be 5'x5' for wheelchair if door opens out.

Measure the depth and width of the level area inside the door. ___________x______in.

If door is not automatic, is door's weight and closing mechanism such that a person in a wheelchair could go through unassisted? YES NO

Are there two doors in a series? YES NO

If yes, measure distances between a series of doors. ________________in.

Do they open in the same direction? YES NO

9. ELEVATORS

Is there one or more public elevators in the building? YES NO

If no, is there a freight elevator in the building? YES NO

Is it key operated? YES NO

"Essential Areas" are those portions of the building for which it was built; i.e. if a building has a lecture hall on the first floor and laboratories on the above floors, the essential areas would be lecture halls and the laboratories. (Toilet areas are surveyed as a separate entity and are not treated under the heading of essential areas.)

Do elevators serve all essential areas? YES NO

Note areas and their functions which are not served by the elevator.

Measure height of elevator controls from floor. (measure to highest floor button) ______________in.

Is there an electric eye present? YES NO

Is there appropriate identification of floor numbers for the blind inside the elevator? (Raised letters or Braille symbols) YES NO

Is there appropriate identification for floors located outside the elevator doors? YES NO

Measure the height of identification. (It should be 4½ feet) ______________in.

Will elevator accomodate a stretcher? (7 feet x 5 feet) No criteria for this, but we are asked to make notation. YES NO

10. ESSENTIAL AREAS

Describe the functions of each of the areas you will survey. (If building has more than one primary purpose or service)

AREA 1

AREA 2

AREA 3

AREA 4

11. ACCESS FROM ENTRY TO INTERIOR OF ESSENTIAL AREAS

	(1)	(2)	(3)	(4)
Is the usable width of corridors and aisles at least 48 inches?	YES NO	YES NO	YES NO	YES NO
Is the narrowest clear doorway with door open at least 32 inches or more?	YES NO	YES NO	YES NO	YES NO
Do doorways have a level area 5 feet from the door in the direction the door swings?	YES NO	YES NO	YES NO	YES NO
Are thresholds flush?	YES NO	YES NO	YES NO	YES NO
If there are any steps from entry to essential areas, give total number of steps.	______	______	______	______
Is there an inclined ramp from entry to the essential areas?	YES NO	YES NO	YES NO	YES NO
If yes, what is the percent of slope?	______	______	______	______

12. INTERIOR OF ESSENTIAL AREAS

If there are any steps between levels within the same essential area, give the total vertical rise in inches.	____in.	____in.	____in.	___in.
Is there a ramp between levels within the same essential area?	YES NO	YES NO	YES NO	YES NO
If yes, does it pass the inclinometer test?	YES NO	YES NO	YES NO	YES NO
Are there any steps between essential areas not served by elevators?	YES NO	YES NO	YES NO	YES NO
Is there appropriate identification of room numbers for the blind?	YES NO	YES NO	YES NO	YES NO
Are they mounted at 4½ feet from floor on door knob side?	YES NO	YES NO	YES NO	YES NO
Is the aisle width at least 32 inches?	YES NO	YES NO	YES NO	YES NO
In lecture halls, is the podium accessible?	YES NO	YES NO	YES NO	YES NO
In labs, are the work spaces accessible and usable by disabled persons?	YES NO	YES NO	YES NO	YES NO

13. ACCESS TO TOILET ROOMS

Choose toilet rooms which have access and facilities (entrance doors, toilet stall, toilet room) most convenient to disabled persons.

Handrails on stairs, ramps and in toilet rooms should be 32 inches from floor. If not, indicate in margin.

Where is the most accessible toilet room(s) located?

Men

Women

	MEN	WOMEN
Are there steps up or down to get to toilet room?	YES NO	YES NO
If yes, how many?	______	______
What is the width of toilet room entrance? (door open)	______in.	______in.
Are there two doors in a series?	YES NO	YES NO
If yes, what is the distance between them?	______in.	______in.
Do they open in the same direction?	YES NO	YES NO

14. TOILET ROOMS

Is the floor level throughout the room?	YES NO	YES NO
Is there free space in room to permit a wheelchair to turn? (60" x 60")	YES NO	YES NO
Is there at least one toilet stall with a 32 inch door that swings out?	YES NO	YES NO
What is the width of the door opening of selected stall with the door open?	______ in.	______in.
Measure inside width of selected stall.	______in.	______in.
Does selected stall have handrails or grab bars on each side?	YES NO	YES NO
If wash bowl has legs, measure distance between legs.	______in.	______in.
Is there insulation on the hot water and drain pipes of the selected wash basin?	YES NO	YES NO
How many inches is the bowl's front apron from the floor?	______in.	______in.

Is there one mirror, towel dispenser, shelf etc., set 40 inches from the floor? YES NO YES NO

15. WATER FOUNTAINS

Choose a water fountain that would be easily accessible and would best accomodate disabled persons.

Where is the water fountain located?

Is fountain wall or floor mounted? ____________________

If wall mounted, measure height of bottom edge above floor. ____________________in.

Measure height from floor to lip on top of fountain. ____________________in.

Indicate whether operated by hand-lever, foot pedal or both. ____________________

Is the water spout located near the front of the equipment? YES NO

Is the water fountain in an alcove? YES NO

Is there a cup dispenser available? YES NO

16. PUBLIC TELEPHONES

Where is the most accessible phone located?

What type (booth, wall, desk?)

If the phone is in a booth, what is width of booth door with door open? ____________________in.

Measure height of most accessible phone dial, headset and coin slot.

ANSWER ONLY THOSE QUESTIONS WHICH APPLY

17. INTERIOR (AUDITORIUM, RESTAURANT ETC.)

What is the width of the walkway between tables or seats? ____________________in.

What is the distance from floor to lowest edge, not necessarily table top, of restaurant table? ____________ in.

If there are only booths, can a wheel chair be placed at the open end of the booth? YES NO

In theaters, lecture halls, etc., can persons remain in wheel chairs in other than an aisle location? - YES NO

If yes, where?

18. ASSITANCE AND AIDS AVAILABLE

Is help available for those needing assistance if arranged for in advance? (either at the building or on campus) YES NO

Who to call in advance for assistance

Phone number

Are wheelchairs available? YES NO

Surveyor

Date

ADDITIONAL COMMENTS OR SKETCHES:

COLORADO COMMISSION ON HIGHER EDUCATION

COMMITTEE ON ELIMINATION OF ARCHITECTURAL BARRIERS

Survey of Building Priorities

The purpose of this survey is to identify those buildings which, in the best judgment of the institution, are of highest priority in terms of the need to eliminate Architectural Barriers to the Handicapped.

Each building currently listed on your Facilities Inventory File (A-1), should be included in one of four Quartiles of priorities. Upon completion of the form, 25% of the campus buildings will be listed under priority 1 (highest), 25% under priority 2, 25% under priority 3, and 25% under priority 4 (lowest).

Instructions for completing the form are as follows:

(A) Building Name - Enter the name or abbreviation of the building as it is identified on your Facilities Inventory File (A - 1, A - 2).

(B) Building Number - Enter the unique building number assigned by the institution for the Facilities Inventory File (A- 1, A - 2).

(C) General Building Type - Enter the Code Number which best describes the Primary Use/Type of this Building.
(Insert the most appropriate code from the following:
(10) Classroom or Classroom/Office; (11) Science;

(12) Engineering; (13) Fine Arts; (14) Instructional Shop; (15) Physical Education; (16) Office; (17) Library; (20) Chapel; (29) Other Academic Facility; (30) Physical Plant Service; (31) Farm Building; (40) Student Center; (41) Hospital or Infirmary; (50) Dormitory; (51) Apartment building; (52) Single Family Dwelling or Duplex; (60) Other Auxiliary Enterprise Facility.)

(D) Accessiblity - If the building is currently free of architectural barriers, as evidenced by display of the International Symbol of Access for the Handicapped, place a check mark (✓) in Column D. If the building is not accessible, leave the column blank.

(E) Unique Colorado Programs - If the building houses any programs that are unique to public higher education in the State of Colorado , place a check mark (✓) in column E. If not, leave this column blank. If you have further questions concerning the definition of "uniqueness", please consult CCHE.

(F) Unique Classrooms - If the building houses a class that is required by a particular program. Place a check mark (✓) in column F. i.e, Architecture is unique at the University of Colorado, Boulder. Physics is a required course needed by all students, therefore the building housing this Physics class would be checked.

(G) Future Use of Building - Complete for all buildings. Insert the most appropriate code from the following: (1) Continue Use Indefinitely with Ordinary Maintenance/Minor Alterations; (2) Continue Use Indefinitely with Major Maintenance/Major

Alterations; (3) Discontinue Use After Five Years;

(4) Discontinue Use Within Five Years.)

(H) Comments - If there is any further information which would be helpful in the process of determining whether or not to renovate the building to eliminate architectural barriers, please indicate in column H.

Completed Forms (along with a copy of a campus map,) should be returned, no later than March 31, to:

Dr. Jerome F. Wartgow
Assitant Director
Colorado Commission
on Higher Education
719 State Services Building
Denver, Colorado 80228

Institutions Name________________

PRIORITY I
(Top 25% of Buildings)

Building Name	Building Number	Primary Use/Type	Accessibility	Unique Programs		Future of Building	Comments
				Colo.	On Campus		
A	B	C	D	E	F	G	H

Building Name	Building Number	Primary Use/Type	Accessibility	Unique Programs Colo. On Campus		Future of Building	Comments
A	B	C	D	E	F	G	H

Institutions Name____________________

PRIORITY III

Building Name A	Building Number B	Primary Use/Type C	Accessibility D	Unique Colo. E	Programs On Campus F	Future of Building G	Comments H

Institutions Name___________________

PRIORITY IV

Building Name	Building Number	Primary Use/Type	Accessibility	Unique Programs Colo. On Campus		Future of Building	Comments
A	B	C	D	E	F	G	H

COLORADO COMMISSION ON HIGHER EDUCATION

WORKSHOP ON ELIMINATION OF ARCHITECTURAL BARRIERS

Room 711, Social Services Building

9:30 - 12:00 Noon
March 11, 1974

9:30	-	Purposes and Objectives of the Workshop
9:45	-	Movie, Slide Presentation, and Discussion on Conducting a Survey for Architectural Barriers
10:15	-	Discussion of Standards and Planning Procedures Contained in CCHE ARCHITECTURAL BARRIERS STUDY
11:15	-	Planning for Campus Visits by Consulting Team

COLORADO GOVERNOR'S COMMITTEE TO PROMOTE OPPORTUNITIES FOR THE HANDICAPPED

INSPECTION FOR ACCESSIBILITY DECAL

Building ______________________ Address ______________________

City ______________________ Purpose ______________________

	Yes	No
Does ground need to be graded?		
Are nearby walkways at least 48" wide?		
Do walkways have a common level? Maximum grade 8% ?		
Are doors at least 32" wide? preferably 36"		
Are thresholds flush with floor?		
Are ramps in use?		
Are gradients of one inch in twelve used?		
Do ramps include handrails 32" in height?		
Is a nonslip surface used?		
Is there a 5 x 5 foot platform with one foot each side of doorway at front of door where ramps are in use and door opens out?		
Are parking spaces at least 12 feet wide allowing 4 feet on each side for loading and unloading?		
Are hallways wide enough (60") to accommodate wheelchairs?		
Do floors have a common level?		
Toilet facilities:		
Is there at least one stall 3 feet wide and 5 feet deep?		
Does the door measure 32" and swing out?		
Are grab bars 33" high and parallel to floor?		
Are grab bars one and one-half inches in outside diameter and one and one-half inches from wall?		
Does the sink have a narrow space to accommodate wheelchairs?		
Are urinals wall mounted 19" from the floor or floor mounted level with the main floor?		
Are mirrors, towel dispensers and shelves set as low as 40" from the floor?		

	Yes	No
Is there appropriate identification (raised signs, etc.) for the blind?	____	____
Knurled handles on doors not intended for normal use?	____	____
Are elevators available on multistory buildings?	____	____
Are controls for the elevator located so they can be reached from wheelchairs?	____	____
Are public telephones suitable for use from a wheelchair and 40 to 48 inches from the floor?	____	____
Is there a phone available for people with hearing disabilities?	____	____
Are water fountains or other water dispensing means set at 30 to 36" from the floor?	____	____
Are water fountains wall mounted rather than recessed?	____	____
Is there a cup dispenser available when fountains are not accessible?	____	____
Do buildings for special purposes (hotels, restaurants) meet specifications?	____	____
Do theaters have spaces available for wheelchairs?	____	____
Are there any hazards that should be removed?	____	____

This building is in good ___ fair ___ poor ___ condition architecturally for the handicapped.

Inspected by: ______________________________ Approved ______ Disapproved ______

APPENDIX B

COLORADO ARCHITECTURAL BARRIERS STATUTE

An Act

(Senate Bill No. 47. By Senators Lucas, Williams, Massari, Cisneros, Donlon, and Bermingham; also Representatives Calabrese, Jackson, Quinlan, Mackie, Compton, West, Baer, Gollob, Brinton, Anaya, Gossard, Hart, Haskell, Rinaldo, Kopel, Knox, Coloroso, DeMoulin, Lisco, O'Brien, Yost, Grove, Fentress, Lamb, Miller, Clark, Foster, Strait, Friedman, Adcock, Wheeler, Monfort, Grandy, and Wailes.)

CONCERNING PUBLIC BUILDINGS CONSTRUCTED WITH STATE OR POLITICAL SUBDIVISION FUNDS, AND PROVIDING STANDARDS MAKING THEM MORE ACCESSIBLE TO, AND USABLE BY, THE PHYSICALLY HANDICAPPED.

Be It Enacted by the General Assembly of the State of Colorado:

Section 1.—**Applicability of standards.**—The standards and specifications set forth in this act shall apply to all buildings and facilities used by the public which are constructed in whole or in part by the use of state, county, or municipal funds, or the funds of any political subdivision of the state. All such buildings and facilities to be constructed from plans on which architectural drawings are started after the effective date of this act from any one of these funds or any combination thereof shall conform to each of the standards and specifications prescribed herein except where the authority responsible for the proper construction for the particular governmental department, agency, or unit concerned shall determine, after taking all circumstances into consideration, that full compliance with any particular standard or specification is impracticable or unnecessary. These standards and specifications shall be adhered to in those buildings and facilities which will be constructed from architectural drawings prepared after the effective date of this act, unless the authority responsible for the construction shall determine that the construction has reached a state where compliance is impractical. This act shall apply to permanent buildings.

Capital letters indicate new material added to existing statutes; dashes through words indicate deletions from existing statutes and such material not part of act.

Section 2.—**Disabilities covered — purpose.**—(1) This act is concerned with nonambulatory disabilities, semiambulatory disabilities, sight disabilities, hearing disabilities, disabilities of incoordination, and aging.

(2) It is intended to make all buildings and facilities covered by this act accessible to, and functional for, the physically handicapped to, through, and within their doors, without loss of function, space, or facility where the general public is concerned.

Section 3.—**Definitions.**—(1) For the purposes of this act the following terms shall have the meanings as herein set forth:

(2) "Nonambulatory disabilities" shall mean impairments that, regardless of cause or manifestation, for all practical purposes, confine individuals to wheel chairs.

(3) "Semiambulatory disabilities" shall mean impairments that cause individuals to walk with difficulty or insecurity. Individuals using braces or crutches, amputees, arthritics, spastics, and those with pulmonary and cardiac ills may be semiambulatory.

(4) "Sight disabilities" shall mean total blindness or impairments affecting sight to the extent that the individual functioning in public areas is insecure or exposed to danger.

(5) "Hearing disabilities" shall mean deafness or hearing handicaps that might make an individual insecure in public areas because he is unable to communicate or hear warning signals.

(6) "Disabilities of incoordination" shall mean faulty coordination or palsy from brain, spinal, or peripheral nerve injury.

(7) "Aging" shall mean those manifestations of the aging processes that significantly reduce mobility, flexibility, coordination, and perceptiveness but are not accounted for in the aforementioned categories.

(8) "Standard" shall mean that when this term appears in small letters it is descriptive and shall mean typical type.

(9) "Fixed turning radius, wheel to wheel" shall mean the tracking of the caster wheels and large wheels of a wheel chair when pivoting on a spot.

(10) "Fixed turning radius, front structure to rear structure" shall mean the turning radius of a wheel chair,

left front-foot platform to right rear wheel, or right front-foot platform to left rear wheel, when pivoting on a spot.

(11) "Involved (involvement)" shall mean a portion or portions of the human anatomy or physiology, or both, that have a loss or impairment of normal function as a result of genesis, trauma, disease, inflammation, or degeneration.

(12) "Ramps" or "ramps with gradients" shall mean ramps with gradients, or ramps with slopes, that deviate from what would otherwise be considered the normal level. An exterior ramp, as distinguished from a "walk", shall be considered an appendage to a building leading to a level above or below existing ground level. As such, a ramp shall meet certain requirements similar to those imposed upon stairs.

(13) "Walk" or "walks" shall mean a predetermined, prepared-surface, exterior pathway leading to or from a building or a facility, or from one exterior area to another, placed on the existing ground level and not deviating from the level of the existing ground immediately adjacent.

(14) "Appropriate number" shall mean the number of a specific item that would be reasonably necessary, in accord with the purpose and function of a building or facility, to accommodate individuals with specific disabilities in proportion to the anticipated number of individuals with disabilities who would use a particular building or facility.

Section 4.—**Design criteria.**—(1) (a) The following design criteria shall be applicable:

(b) The collapsible-model wheel chair of tubular metal construction with plastic upholstery for back and seat is most commonly used. The standard model of all manufacturers falls within the following limits, which are used as the basis of consideration:

(i) Length: Forty-two inches

(ii) Width, when open: Twenty-five inches

(iii) Height of seat from floor: Nineteen and one-half inches

(iv) Height of armrest from floor: Twenty-nine inches

(v) Height of pusher handles (rear) from floor: Thirty-six inches

(vi) Width, when collapsed: Eleven inches.

(c) The fixed turning radius of a standard wheel chair, wheel to wheel, is eighteen inches. The fixed turning radius, front structure to rear structure, is thirty-one and one-half inches.

(d) The average turning space required when turning either one hundred eighty or three hundred sixty degrees is sixty by sixty inches.

(e) A minimum width of sixty inches is required for two individuals in wheel chairs to pass each other.

(f) In a wheel chair the average unilateral vertical reach is sixty inches and ranges from fifty-four inches to seventy-eight inches.

(g) The average horizontal working (table) reach is thirty and eight-tenths inches and ranges from twenty-eight and one-half inches to thirty-three and two-tenths inches.

(h) The bilateral horizontal reach, both arms extended to each side, shoulder high, ranges from fifty-four inches to seventy-one inches and averages sixty-four and one-half inches.

(i) An individual reaching diagonally, as would be required in using a wall-mounted dial telephone or towel dispenser, would make the average reach, on the wall, forty-eight inches from the floor.

(j) Most individuals ambulating on braces or crutches, or both, or on canes, are able to manipulate within the specifications prescribed for wheel chairs, although doors present quite a problem at times. However, a crutch tip extending laterally from an individual is not obvious to others in heavily trafficked areas, and not as obvious or protective as a wheel chair and is, therefore, a source of vulnerability.

(k) On the average, individuals five feet six inches tall require an average of thirty-one inches between crutch tips in the normally accepted gaits.

(l) On the average, individuals six feet tall require an average of thirty-two and one-half inches between crutch tips in the normally accepted gaits.

Section 5.—**Grading — walks --- parking lots.**—(1) Ground shall be graded, even contrary to existing topography, so that it attains a level with a normal entrance which will make a facility accessible to individuals with physical disabilities.

(2) Public walks shall be at least forty-eight inches wide and shall have a gradient not greater than five per

cent. These walks shall be of a continuing common surface, not interrupted by steps or abrupt changes in level. Wherever walks cross other walks, driveways, or parking lots they shall blend to a common level. A walk shall have a level platform at the top which is at least five feet by five feet, if a door swings out onto the platform or toward the walk. This platform shall extend at least one foot beyond each side of the doorway. A walk shall have a level platform at least three feet deep and five feet wide, if the door does not swing onto the platform or toward the walk. This platform shall extend at least one foot beyond each side of the doorway.

(3) Spaces in parking lots that are accessible to the building or facility shall be set aside and identified for use by individuals with physical disabilities. An adequate parking space is one that is open on one side and which allows room for individuals in wheel chairs or individuals on braces and crutches to get in and out of an automobile onto a level surface, suitable for wheeling and walking. Parking spaces for individuals with physical disabilities when placed between two conventional diagonal or head-on parking spaces shall be twelve feet wide. Care in planning shall be exercised so that individuals in wheel chairs and individuals using braces and crutches are not compelled to wheel or walk behind parked cars. Consideration shall be given to the distribution of spaces for use by the disabled in accordance with the frequency and regularity of their parking needs. Walks shall be in conformity with section 5 of this act.

Section 6.—**Ramps.**—(1) Where ramps with gradients are necessary or desired, they shall conform to the following specifications: A ramp shall not have a slope greater than one foot rise in twelve feet, or eight and thirty-three hundredths per cent, or four degrees fifty minutes. A ramp shall have handrails on at least one side, and preferably two sides, that are thirty-two inches in height, measured from the surface of the ramp, that are smooth, that extend one foot beyond the top and bottom of the ramp, and that as far as practicable conform with the "American Standard Safety Code for Floor and Wall Openings, Railings, and Toe Boards" as promulgated by the American Standards Association, Inc.

(2) A ramp shall have a surface that is nonslip. A ramp shall have a level platform at the top which is at least five feet by five feet, if a door swings out onto the platform or toward the ramp. This platform shall extend at least one foot beyond each side of the doorway. A ramp shall have a level platform at least three feet deep and five feet wide, if the door does not swing onto the platform or

toward the ramp. This platform shall extend at least one foot beyond each side of the doorway. Each ramp shall have at least six feet of straight clearance at the bottom. Ramps shall have level platforms at thirty foot intervals for purposes of rest and safety and shall have level platforms wherever they turn. At least one primary entrance to each building shall be usable by individuals in wheel chairs. At least one entrance usable by individuals in wheel chairs shall be on a level that would make the elevators accessible.

(3) Doors shall have a clear opening of no less than thirty-two inches when open and shall be operable by a single effort. The floor on the inside and outside of each doorway shall be level for a distance of five feet from the door in the direction the door swings and shall extend one foot beyond each side of the door. Sharp inclines and abrupt changes in level shall be avoided at doorsills. As much as practicable, thresholds shall be flush with the floor.

(4) (a) Stairs shall conform to standards of the American Standards Association, Inc., with the following additional considerations:

(b) Steps in stairs shall be designed wherever practicable so as not to have an abrupt or square nosing. Stairs shall have handrails thirty-two inches high as measured from the tread at the face of the riser. Stairs shall have at least one handrail that extends at least eighteen inches beyond the top step and beyond the bottom step. Steps should, wherever possible, and in conformation with existing step formulas, have risers that do not exceed seven inches.

(5) Floors shall wherever practicable have a surface that is nonslip. Floors on the same story shall be of a common level throughout or be connected by a ramp in accord with section 6 (1) ~~and~~ section 6 (2), inclusive.

(6) (a) An appropriate number of toilet rooms, in accordance with the nature and use of a specific building or facility, shall be accessible to, and usable by, the physically handicapped. Toilet rooms shall have space to allow traffic of individuals in wheel chairs, in accordance with section 4. Toilet rooms shall have at least one toilet stall that:

(i) Is three feet wide.

(ii) Is at least four feet eight inches, preferably five feet, deep.

(iii) Has a door, where doors are used, that is thirty-two inches wide and swings out.

(iv) Has handrails on each side, thirty-three inches high and parallel to the floor, one and one-half inches in outside diameter, with one and one-half inches clearance between rail and wall, and fastened securely at ends and center.

(v) Has a water closet with the seat twenty inches from the floor.

(b) Toilet rooms shall have lavatories with narrow aprons, which when mounted at standard height are usable by individuals in wheel chairs; or shall have lavatories mounted higher, when particular designs demand, so that they are usable by individuals in wheel chairs.

(c) Mirrors and shelves shall be provided above lavatories at a height as low as practicable and no higher than forty inches above the floor, measured from the top of the shelf and the bottom of the mirror.

(d) Toilet rooms for men shall have an appropriate number of wall-mounted urinals with the opening of the basin nineteen inches from the floor, or shall have floor-mounted urinals that are on a level with the main floor of the toilet room.

(e) Toilet rooms shall have an appropriate number of towel racks, towel dispensers, and other dispensers and disposal units mounted no higher than forty inches from the floor.

(7) (a) An appropriate number of water fountains or other water-dispensing means shall be accessible to, and usable by, the physically disabled.

(b) Water fountains or coolers shall have up-front spouts and controls. Water fountains or coolers shall be hand-operated or hand and foot-operated.

(8) (a) An appropriate number of public telephones shall be made accessible to, and usable by, the physically disabled.

(b) Such telephones shall be placed so that the dial and the handset can be reached by individuals in wheel chairs.

(c) An appropriate number of public telephones shall be equipped for those with hearing disabilities and so identified with instructions for use.

(9) Elevators shall be provided and shall be accessible to, and usable by, the physically disabled at all levels normally used by the general public. Elevator control buttons shall have identifying features for the benefit of the blind. Elevators shall allow for traffic by wheel chairs.

(10) Switches and controls for light, heat, ventilation, windows, draperies, fire alarms, and all similar con-

trols of frequent or essential use, shall be placed within the reach of individuals in wheel chairs.

Section 7.—**Identification of facilities for the blind.**—Appropriate identification of specific facilities within a building used by the public is essential to the blind. Raised letters or numbers shall be used to identify rooms and offices. Such identification shall be placed on the wall, to the right or left of the door, at a height between four feet six inches and five feet six inches, measured from the floor, and preferably at five feet. Doors that are not intended for normal use, and that are dangerous if a blind person were to exit or enter by them, shall be made quickly identifiable to the touch by knurling the door handle or knob.

Section 8.—**Warnings — dangerous conditions.**—(1) Audible warning signals shall be accompanied by simultaneous visual signals for the benefit of those with hearing disabilities.

(2) Visual signals shall be accompanied by simultaneous audible signals for the benefit of the blind.

(3) Every effort shall be exercised to obviate hazards to individuals with physical disabilities.

(4) Access panels or manholes in floors, walks, and walls can be extremely hazardous, particularly when in use, and shall be avoided where possible.

(5) When manholes or access panels are open and in use, or when an open excavation exists on a site, particularly when it is approximate to normal pedestrian traffic, barricades shall be placed on all open sides, at least eight feet from the hazard, and warning devices shall be installed in accord with the provisions of subsection (2) of this section.

(6) Low-hanging door closers that are within the opening of a doorway when the door is open, or that protrude hazardously into regular corridors or traffic ways when the door is closed, shall be avoided.

(7) Low-hanging signs, ceiling lights, and similar objects or signs and fixtures that protrude into regular corridors or traffic ways shall be avoided. A minimum height of seven feet, measured from the floor, shall be had.

Section 9.—**Lighting.**—Lighting on ramps shall be at least equal to that prescribed by the specifications of American Standards Association, Inc. Exit signs shall be in accordance with specifications of American Standards Association, Inc., except as modified by section 7 of this act.

Section 10.—**Responsibility for enforcing standards.**—(1) (a) The responsibility for enforcement of this act shall be as follows:

(b) Where state funds are utilized, the division of public works;

(c) Where funds of counties, municipalities or other political subdivisions are utilized, by the governing bodies thereof.

(2) The government unit responsible for enforcement of this act may exempt any building or facility from any provision of this act upon a finding that compliance with such provision would subject an undue hardship on the taxpayers of the governmental unit liable for the cost of such compliance in relation to the benefits to the physically handicapped that might be derived from such compliance.

Section 11.—**Safety clause.**—The general assembly hereby finds, determines, and declares that this act is necessary for the immediate preservation of the public peace, health, and safety.

A. Woody Hewett
Robert L. Knous
PRESIDENT OF THE
SENATE / pro Tem

Allen Dines
Allen Dines
SPEAKER OF THE HOUSE
OF REPRESENTATIVES

Mildred H. Cresswell
Mildred H. Cresswell
SECRETARY OF THE
SENATE

Evelyn T. Davidson
Evelyn T. Davidson
CHIEF CLERK OF THE HOUSE
OF REPRESENTATIVES

APPROVED 4:25 PM May 27, 1965

John A. Love
John A. Love
GOVERNOR OF THE STATE OF COLORADO

reducing architectural barriers

so that the handicapped will be able to live richer lives.